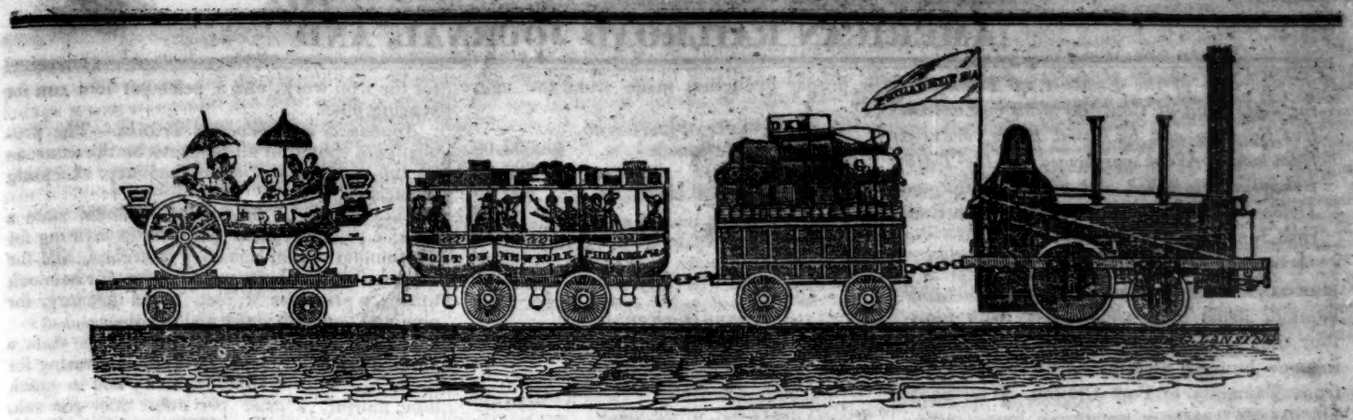

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, NOVEMBER 23, 1833. [VOLUME II.—No. 47.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 23, 1833.

☞ FIVE Numbers more will complete the second Volume of the Railroad Journal. It was stated in a previous number that *thus far* it had not paid its expenses—at the same time a suggestion was made to *Railroad Companies*, and to individuals who feel a deep interest in the success of *Internal Improvements*, and especially of the Railroad cause, that they would probably promote, not only their own, but also the public interest, by ordering a few copies of the Journal from its commencement, *bound*, in volumes or parts, as well as one or two additional subscriptions to the ensuing Volume, and thereby insure its continuance, and increase its usefulness. In reply to that suggestion, several liberal and highly complimentary communications have been received from gentlemen in different parts of the country, from which little doubt is entertained by the proprietor of the success of the measure which he adopted to insure its continuance, and increase its utility to the public. It is proper, however, for him now to state, that, in order to insure its success and prosperity, it will not be sent to any subscriber, after the close of the *present* volume, who shall *then* be in *arrear* for the work—until payment shall have been made for the past, and *in advance for the then current volume.* It is also proper for him to state, that, should it be continued in its present form, he will print, of the ensuing volume, a small number *only* in addition to what will be necessary to supply those who shall *commence with the year*—and that those extra copies will be designed *expressly* for those who may desire it from the *commencement* of the work.

It has been suggested to us by several friends of the Journal, that it would be more serviceable, because *better preserved*, if it were to be issued in *semi-monthly* or *monthly* parts, stitched in a cover, instead of weekly numbers, as heretofore. Of the importance of this suggestion scarcely a doubt can be entertained, as there would be fewer losses in the mails, and they would be much more easily preserved; yet many of its readers desire to learn more frequently than once a month what new improvements are being made, and therefore prefer its present arrangement. Others, again, have recommended an increase of price to *four*, instead of *three* dollars. To *this* suggestion *we* certainly should not object, if we thought our subscribers generally would cheerfully comply with it. In order, therefore, to ascertain their opinion upon both suggestions, and at the same time show the work in a *semi-monthly* form, with a cover, we shall issue the *two* last numbers of the present Volume together, with a Title Page and Index to the second or last half of the Volume, that they may then say how they prefer to receive it the ensuing year.

*** Necessity, and *necessity only*, will compel a discontinuance of many *exchange* papers, and the Proprietor trusts that those Editors who may not receive the Journal after the first number of the ensuing volume, will attribute its discontinuance to the true cause, viz. a want of patronage to meet its necessary expenses, and not to a want of inclination to reciprocate their favors. Should a different state of affairs result from his present exertions, he will be happy again to renew the acquaintance. He regrets also that he is entirely unable to comply with the oft-repeated "Please exchange," which meets his eye from every quarter of the Union. Nothing would afford him more pleasure than to exchange with all who may desire it—*except* such an increase of patronage as would afford him a handsome income over all expenses.

New-York and Erie Railroad Convention.—A convention of delegates from the counties immediately interested in the proposed railroad from this city to Lake Erie, through the southern tier of counties, assembled in this city on the 20th instant, and continued the meeting by adjournments till the evening of the 21st.

Delegates appeared and were recognized from the counties of Chatauque, Cattaraugus, Allegany, Steuben, Tioga, Broome, Otsego, Cortland, Delaware, Sullivan, Orange, Rockland, and New-York.

The convention was organized by the appointment of his Honor Gideon Lee, President;

George D. Wickham, Esq. of Orange, and James Pumpelly, Esq. of Tioga, Vice-Presidents;

William W. McCay, Esq. of Steuben, and David Ruggles, Esq. of Orange, Secretaries.

Much information was communicated respecting the practicability and incalculable importance of the proposed thoroughfare through so extended a section of the State, which is destitute of adequate facilities to our commercial metropolis; and also respecting the deep and universal interest felt by the inhabitants on the route, and their disposition to aid to the utmost of their ability in the furtherance and accomplishment of the enterprize.

Numerous resolutions were adopted on the subject; and also a petition to the Legislature for aid to the southern counties, through the medium of the New-York and Erie Railroad Company, in the execution of the work; these counties having long been encouraged to expect the assistance of the State, in opening an avenue to market, by which they may be placed on a footing corresponding in some measure to the advantages which have been conferred, by the legislation and funds of the State, on the more northerly counties.

Provision was made likewise for an address to the public on the subject of the railway.

A more particular statement of the proceedings, together with the resolutions, petitions, &c. &c. will be given in our next number.

Railroad Meetings.—We give to-day the proceedings of two meetings called in different sections of the United States, for the purpose of promoting the cause of *Railroads*; and it may be proper for us here to observe, that it is our intention to notice, hereafter, in a concise manner, *all* meetings called for the purpose of promoting the cause of *Internal Improvements*, which may fall under our observation, that those of our readers, who may desire to know what works of the kind are in contemplation, may not have occasion to look elsewhere for the information.

A Comparison of the Expense of Transporting 5000 Tons of Coal 100 miles by Locomotive Engines, and by Canal Boats, deduced from actual Work performed on the Little Schuylkill Railroad, and on the Lehigh and Delaware Canals. [For the American Railroad Journal.]

It is proper to premise that a locomotive engine has for a considerable time during the past summer made three trips a day, with forty-four tons of coal at each load; thus transporting one hundred and forty-four tons per day, from Tamaqua to Port Clinton. The usual business is however ninety-six tons for one engine; this is done with ease in short days, and could very conveniently be increased, if the daily distance to be passed was greater.

It is proposed in the following estimate to allow for the work of the engine, one hundred tons a day for twenty miles, or twenty tons a day transported one hundred miles, for two hundred and fifty days.

CAPITAL EMPLOYED.

Cost of engine and tender, -	$5,000 00
One-fifth additional is estimated,	1,000 00
Sixteen coal waggons at $100 each, - - - -	1,600 00
One-fifth extra, - - -	320 00
	$7,920 00

ANNUAL EXPENSE.

Interest at 6 per cent., -	$475 00
Repairs at 10 per cent., -	792 00
Depreciation 5 per cent., -	396 00
One engineer at $2, - -	500 00
One fireman at $1, - -	250 00
Two breakmen, - -	450 00
Oil, 375 gallons at $1.12½, -	422 00
Two cords pine wood per day at $2, - - - -	1,000 00
20×250=5000)	$4,285 20
	$87 07

Or 87 7/10 cts. nearly per ton, for 100 miles.

The following estimate of the expense of transporting 5000 tons on the Lehigh and Delaware Canals is deduced from statements furnished by boatmen, of the work actually done by them. This, it may observed, can be increased but little without running in the night. The boatmen say that they could gain nothing by a relieve of horses, the locks are so frequent that the horse rests and feeds sufficiently.

It is further to be remarked, that the railroad waggons are loaded in or at the mouth of the mine from whence the coal is carried to the depot, and that as the boat cannot be brought to the mine, the expense of transporting the coal from the mine to the boat and unloading it into the boat is an additional expense incidental to the canal, and the waste of coal by this operation is also in addition, for these items not being precise data, $8 per ton are allowed. The labor of unloading the coal from the boat at the wharf is also greater than that of unloading from waggons, and a part thus handled must be shovelled on the screen, which is not required when the coal is unloaded from waggons, for this labor $10 per ton are estimated.

ESTIMATE.—[illegible]s ascertained from experience that 2 good horses, with 4 men and 2 boys, will haul 100 tons of coal in 2 boats 100 miles on the Lehigh and Delaware Canals, and return in 12 days; hence 24 horses with 48 men and 24 boys take 100 tons in 24 boats 100 miles in 1 day and return.

To transport the same quantity 20 miles a day, or one fifth of that distance, will require 48 horses, 9.6 men, 4.8 boys, and 4.8 boats. To simplify the calculation, 5 horses, 10 men, 5 boys and 5 boats, are supposed to be employed and the proper deduction made from the aggregate.

CAPITAL EMPLOYED.

Five boats at $600 each -	$3,000 00
One fifth extra - - -	600 00
Five horses at $80 each -	400 00
One fifth extra - -	80 00
Five harness at $6 - -	30 00
	$4,110 00

ANNUAL EXPENSE.

Interest at 6 per cent., - -	$246 00
Repairs of boats 5 per cent., -	180 00
Depreciation of do. and horses 15 per cent., - - - -	616 50
Keeping 5½ horses at $20 per year - - - - -	625 00
Wages of 5 men at $1 per day, (250 days) - - - -	1,250 00
Wages of 5 men at 90 cts. - -	1,125 00
Wages of 5 boys at 75 cts. - -	937 50
	$4,979 00
As 5 : 4079.60 :: 4.8 :	4,760 42
Unloading waggons from mine to boat, and waste 8 cts. per ton,	400 00
Additional expense for unloading boats and screening $10 -	500 00
	5,660 42

Which ÷5000=$1.13.11 : or $1.13⅛ per ton for 100 miles.

The above statements are made from actual performance on the railroad and canals referred to, and the expense thus ascertained *for transporting* on the canal, viz.: 95½ cents per ton for 100 miles, is almost precisely the same that it paid for boating coal on the Lehigh and Delaware Canals, exclusive of the charge for loading and unloading, which is paid for in addition. Yours, &c. I.

CHENANGO CANAL NOTICE.—Sealed proposals will be received by the canal commissioners until the *thirtieth day of November* next, for constructing about *thirty-eight miles of said canal, to wit: from the Erie canal near Whitesborough, to the village of Sherburne*, and also, *eighty-seven locks*, five or six of which are to be combined locks, of stone masonry, and also the lock on the level, connecting with the Erie canal; *two aqueducts of stone masonry, two aqueducts with wooden trunks*, and the necessary *bridges, culverts, and waste weirs*.

For the Sections.—The propositions should state a specific price for grubbing and clearing the section, for extra grubbing and clearing by the acre, for extra side chopping and clearing by the acre, a price per cubic yard for common excavations, for solid slate, and quarried rock, for cemented clay and gravel, or cemented sand and gravel, for quick-sand, for embankments, for lining, for puddling, and for slope wall.

For Locks with Wooden Chambers.—The propositions should state a specific price per cubic yard for excavation, for embankment, for masonry laid in hydraulic cement, for dry wall masonry, a price per cubic foot for oak, pine, and hemlock timber, a price per M. feet, board measure, for oak, pine, hemlock, and cedar plank, boards, and scantling, a price per foot run for bearing piles, and a sum in gross for all wrought and cast iron, excepting paddle gates.

For Stone Locks.—The propositions should state a specific price per cubic yard for the masonry, which is to include the cutting of the hollow quoins, the coping and culverts, the face of the lock to be hammered work, the propositions in other respects to be the same as for the locks with wooden chambers, excepting the dry wall.

Aqueducts of Stone Masonry.—The propositions should state a specific price per cubic yard for foundations, for masonry in the arches, and for other masonry, a price per cubic foot for oak, pine, and hemlock timber, a price per M. feet, board measure, for pine and hemlock plank, boards, and scantling, a price per pound for the iron work, and a price per foot run for bearing piles.

Aqueducts with Wooden Trunks.—The propositions should in all respects be the same as for the aqueducts of stone masonry, excepting the arches.

Culverts.—The propositions should state a specific price per cubic yard, for excavating for the foundation, for masonry in arches, and for other masonry, a price per cubic foot for hemlock timber, a price per M. feet, board measure, for pine and hemlock plank and boards.

Bridges.—The propositions should state a specific price per cubic yard, for excavating for the foundation for stone masonry laid in quick lime mortar, a price per cubic foot for oak, pine, and hemlock timber, a price per M. feet, board measure, for pine and hemlock plank, boards, and scantling, a price per pound for iron work, a gross sum for painting with two coats of white lead.

Waste Weirs.—The propositions should state a specific price per cubic yard, for excavating for the foundation, for stone masonry in hydraulic cement, a price per cubic foot for oak, pine, and hemlock timber, a price per M. feet, board measure, for oak, pine, and hemlock plank, boards, and scantling.

The prices for the enumerated items, in the structures above mentioned, are to include the expense of every kind of material and labor necessary for their construction.

The oak and pine timber is to be cut in the month of February, 1834; the oak timber for gates in the locks and waste weirs to be sawed previous to the first day of October, 1834, and put under cover; the timber for the pine plank, boards, and scantling, to be cut in February, 1835, and sawed and put under cover previous to the first of June of that year.

The contracts are to contain stipulations prohibiting the use of ardent spirits, and subcontracting the work, except for delivering materials, and are to be completed by the fifteenth of October, 1836.

Security will be required for the performance of the contracts, and the propositions should be accompanied by the names of responsible persons, signifying their assent to become sureties. If the character and responsibility of those proposing, and the sureties they shall offer, is not known to the undersigned, or the chief or resident engineer, a certificate of good character, and the extent of their responsibility, signed by the first judge or clerk of the county in which they severally reside, will be required.

No transfer of contracts will be recognized.

The line of the canal and the maps and profiles, and the plans for the different structures, with specifications of the kind of material and manner of construction, will be ready for examination by the 11th of November. The chief and resident engineers will be on the line or in its vicinity, to give all necessary information, and will furnish blank propositions. The undersigned and the chief engineer will attend at the village of *Hamilton*, from the 25th to the 30th of November, to receive propositions.

The party to the propositions which may be accepted will be required to enter into contracts immediately after the 30th of November.

WM. C. BOUCK,
Acting Canal Commissioner.

October 22, 1833.

P. S.—Publishers of papers in the State of New-York will confer a public favor by giving the above one or two insertions in their paper.

SUSPENSION RAILWAY.—The Boston Transcript, in noticing the proposed improvements in East Boston, that is, we suppose in the islands in Boston harbor, has the subjoined account of a suspension railway:

We were particularly interested with the novelty of a Suspension Railway, located across the marshes, for the purpose of testing, as we are informed, this truly American invention, and to correct, by actual demonstration, the many misconceptions relative to this very ece-

nomical and highly important mode of transporting passengers and merchandize. Great curiosity was evinced to see how a car, intended to convey twenty or thirty passengers on two wheels only, one *before* the other, could run upon a single rail, which it did with perfect steadiness, and without the possibility of accident of any kind. There seemed to be but one opinion on the subject, and all were strongly impressed with the usefulness and importance of the invention. A locomotive engine was running upon the railway all the afternoon, but being in an unfinished state, it was not attached to the car. We sincerely wish success to the several projects contemplated on this island, and that the growth and prosperity of this new city may equal the hopes and industry of its enterprizing owners.

STEAM CARRIAGE.—The following paragraph on this subject, is from a late Birmingham paper:

On Wednesday last, Messrs. Heaton, of Birmingham, made another experiment with their steam coach, to ascend the hill at Bromsgrove Lickey, which is a loose sandy surface, so much so, that the wheels of their machine, above fifteen hundred weight, carried a hill of sand before them about three inches deep. The hill is about seven hundred yards long, and rises on an average one yard in nine, and in some places one yard in eight, and is declared by eminent surveyors to be the worst piece of road in the kingdom. The hill was mounted by their machine, with a mail-coach attached, fifteen hundred weight, and nine persons, in nine minutes. They then took up a number of their friends, and proceeded on to Bromsgrove, as far as the market place, there they turned the machine around, and returned to the Crab Mill Inn, about fifteen miles; this was accomplished in two hours and twenty-two minutes, including all stoppages. Having staid a considerable time at the Crab Mill Inn, they returned home, having accomplished the greatest undertaking in the history of steam locomotion on the common road. They arrived in Birmingham, bringing with them up Worcester street, an ascent of one yard in twelve, thirty-two persons.

Load of a Locomotive Engine. By HENRY D. BIRD. [From the Petersburg Intelligencer.]

GENTLEMEN,—The following account of the performance of one of our engines will no doubt interest you and many of your readers.

On Monday last, the Liverpool brought in a train, consisting of 15 cars, and one coach, carrying 127 bales of cotton, 364 bushels of wheat, 162 bushels of corn, and about 30 persons, including passengers and agents of the company. The gross weight in motion may be summed up as follows:

Produce and passengers,	83,620 lbs.
Cars, Coach and Engines,	67,500
	151,120

or nearly 62½ tons. The weight of produce alone was upwards of 35 tons. This load was put in motion with great ease by the engine, and on level ground was carried at a speed of 15 miles per hour. It was set in motion on ascents of 30 feet to the mile, (on which we had occasion to stop, and set down passengers,) and carried them up at a rate varying from 8 to 10 miles an hour.

This is the largest load which has ever been on the road at any single time, and when we compare it with the small size of the engine, and consider the various ascents on the railroad, it may well be called immense. The Liverpool weighs about five tons, and has 9 cylinders, with a stork of 18 inches, and drives four wheels. Her general working pressure is 50 pounds, ranging up to 60, which the lock-up valves blows off. I add the technical details in order that the performance of this engine may be justly appreciated by professional men.

Yours, respectfully, HENRY D. BIRD.

Specification of the Patent granted to RICHARD TREVETHICK, *of St. Aith, in the County of Cornwall, Engineer, for an Improved Steam Engine.* Dated Feb. 21, 1831. [From the Repertory of Patent Inventions.]

To all to whom these presents shall come, &c. &c.—*Now know ye*, that in compliance with the said proviso, I, the said Richard Trevethick, do declare that the essential points in my improved steam engine for which I claim to be the first and true inventor, are

Firstly, The placing of the boiler within the condenser in order to obtain the additional security of the strength of the condenser to prevent mischief in case the boiler should burst, and also by the same arrangement to conveniently make the condenser with a very extensive surface, enabling me to condense the steam without injecting water into it:

Secondly, The enclosing of the condenser in an air water vessel, by which the intention of safety from explosion is further provided for, and my engine, really rendered what I denominate it, *a high pressure safety engine:*

Thirdly, The condensing of the steam in the condenser by means of a current of cold air or cold water forced against the outsides of the condenser:

Fourthly, The returning of the condensed steam from the condenser back again into the boiler, to the end that sediment and concretion in the boiler may be prevented: and,

Fifthly, The blowing of the fire with the air after it has been heated by condensing the steam.

In forming my improved steam engine, I employ several or all of these points according to convenience, in combination with the other necessary parts of steam engines in common use.

These my essential points will admit of various modifications as to form and proportions, such as must be and are quite familiar to every competent steam engine manufacturer, and therefore it will be sufficient for the perfect description of my improved steam engine that I explain some of the modes of forming and combining the essential points of my invention with the other parts of steam engines in common use.

In my most favorite form of engine, in which I condense by a current of cold air, the fire-place and flue, the boiler, the condenser and the air-vessel, are made of six concentric tubes, standing in an upright position. The inner or first tube forms the fire-place and flue, and at the same time the inner side of the boiler. This tube is conical having its small end upwards. The next or second tube is cylindrical, about six inches larger in diameter than the lower end of the first tube, and forms the outside of the boiler, leaving a space all around of about three inches at the bottom, and so much more at the top as the flue is taper, for holding water and steam between the two tubes. The third tube is about two inches larger in diameter than the second, in order to allow a space of about an inch for powdered charcoal or some other slow conductor of heat. This tube also constitutes the inner side of the air-vessel. The fourth tube is about two inches larger than the third, and forms the inner side of the condenser. The fifth tube, about two inches larger than the fourth, forms the outside of the condenser; and the sixth tube, about two inches larger than the fifth, forms the outside of the air-vessel and at the same time the outside of the whole of the generating and condensing apparatus, consisting of fire-place, flue, boiler, condenser, and air-vessel. These tubes are made of wrought-iron plates rivetted together, and are all cylindrical except the first, which is conical, the bottom or fire end being the largest.

The first inner tube is closed at the bottom, but has an opening on one side near the bottom, through which the fire-bars are introduced and the ashes and clinkers taken away. To this opening a neck-piece about three inches long is rivetted, having a flanch to fit against the inside of the second tube, when the two tubes are concentric; through the side of which second tube is an opening corresponding with that in the first tube, and the flanch is screwed to the second tube so as to make one opening through the sides of the two tubes. The second tube extends downwards about five inches below the first tube and has a flanch turning inwards, to which a round plate of iron is screwed, forming the bottom of the boiler.

The first tube has an external flanch at the top, and the second tube an internal flanch, both of the same height, and screwed to a cast iron circle plate or cap-piece, which extends wide enough around the boiler to form also the cover for the air-vessel. This plate has a hole in the middle as large as the flue. The sides of the condenser and air-vessel are formed of four concentric tubes, each about two inches larger than the one within it. The inner and outer of these tubes constitute the sides of the air-vessel, and are each furnished with an external flanch at the top, by which they are screwed to the cap-piece. The two intermediate tubes constituting the sides of the condenser are rivetted together at the top, leaving a space of about an inch between their upper ends and the cap-piece, so as to allow of a free communication over them between the outer and inner parts of the air-vessel. The inner tube of the air-vessel extends downwards about an inch below the boiler, and is closed by a flat plate screwed on to a flanch projecting inwards from the tube. The two tubes of the condenser descend about three inches lower than the boiler, the inner tube has an internal flanch to which a flat circular plate is screwed to close up the tube. The outer tube of the condenser is of the same length with the inner, and provided with an external flanch about three inches broad. The outer tube of the air-vessel has an external flanch two inches broad, and is just long enough to come down upon the broad flanch of the condenser last described, and these two flanches are together bolted upon a bottom piece of cast-iron, which is a dish of four inches deep, and equal in diameter with the diameter of the outer tube, and having a flanch the same breadth as the flanch of the outer tube, and the bottom piece is secured to the air-vessel, and the outer tube of the condenser by bolts going through all the three flanches.

An opening is made through the sides of all the four tubes of the condenser and air-vessel, opposite to, and as wide as the fire-place, opening through the side of the boiler. The upper part of both openings to be of the same height, but the outer opening is made as low as the bottom of the boiler, in order to allow room for a pipe to enter that part of the boiler for forcing the water into it, and also another pipe and cock for drawing off the water or sediment, in case foul water be used by accident or carelessness. These two openings through the condenser and air-vessel, and through the boiler, constitute one fire doorway through all the six tubes for access to the fire-place. A ring is placed between the two tubes of the condenser around the fire doorway, so as to cut off all communication of the steam in the condenser with the air in the doorway. Another similar ring is placed between the condenser and the outer tube, to prevent the escape of air into the fire doorway. And a half ring is placed in the lower part of the fire doorway, between the condenser and the inner tube of the air-vessel, to prevent ashes from falling into the air-vessel, and yet allow a free passage for the air from the inner part of the air-vessel into the upper part of the fire doorway. These two rings and the half ring are secured in their

places by rivets passing through all of them and through the tubes, and uniting all firmly together, the interstices being filled with iron cement. A ring is also placed between the boiler and the air-vessel around the fire doorway, against the outside of which ring the charcoal powder is tightly rammed, and will hold the ring in its place without the necessity of either rivets or screws. That part of the fire doorway which is above the fire bars is supplied with an inner door to shut the fire-place even with the outside of the boiler, and exclude all access of air to the fire, except through the grating. The whole of the fire doorway is enclosed by an outer door even with the outside of the air-vessel, to exclude all air except that which comes through the air-vessel.

A pipe is fixed in the bottom or dish-piece leading to a forcing pump ,to draw the water out of the condenser and force it into the bottom of the boiler through the pipe before described.

A blowing cylinder of about ten times the content of the main cylinder is screwed against the outside of the air-vessel, and opposite the two outlet valves of the blowing cylinder, two apertures are made in the air-vessel, through which the air is forced in.

The main cylinder of the engine of the usual dimensions, according to power wanted, is also screwed against the outside of the air-vessel, high enough above the blowing cylinder to allow room for the main crank shaft to work between them.

The forcing pump before mentioned is also screwed to the outside of the air-vessel, and thus my improved steam engine becomes more compact and convenient than any preceding steam engine.

For the purpose of supplying the boiler with distilled water in case there should be a deficiency in it, a small vessel made of two upright tubes, one within the other, is placed on the cap-piece, the inner tube is of the same diameter as the flue, and forms a continuation of it, the outer tube is about six inches larger than the inner, and the space at the top and bottom between the two tubes is closed by two ring-shaped pieces. This vessel may be about eighteen inches high; a cock is fixed in the top of this vessel to which a bent pipe is fastened, leading to and united with a pipe which arises from the top of the condenser, and passes through a hole in the cap-piece, and thus a communication between the supplying vessel and the condenser may be opened or shut at pleasure. Another pipe also furnished with a stop-cock arises from the vessel, and communicates with a water cistern, to receive its supply of water when required. A third pipe, having a cock in it, opens into the vessel near the bottom, to let out the sediment; a small cock to let the air out is also fixed in the top of the vessel, which cock may also be used for letting air out of the condenser.

In order to supply the boiler with water, by means of this vessel, the stop-cock leading to the condenser is shut, and that leading to the cistern is opened, and at the same time the air cock is opened to allow the air to escape, that the water may fill the vessel. When the vessel is nearly full of water, the air-cock and the cock from the cistern are shut, and that in the pipe leading to the condenser is opened: the water being then heated by the flue, is converted into steam, which passing into the condenser is there reduced to water again, leaving the sediment or salt in the supplying vessel, which sediment or salt may be occasionally blown out through the bottom pipe by filling the vessel with water, shutting the water, steam, and air cocks, and opening the cock of the outlet pipe at a time when the steam in the vessel is strong.

But the supply of water from the condenser being always equal to that converted into steam and used in the engine, there is no tendency to a variation in the height of the water in the boiler, except there be leakage or waste of steam in some part of the engine. An upright glass tube, having an iron tube of communication with the lower part of the boiler, and another iron tube of communication to the upper part of the boiler, is conveniently placed against the outside of the air-vessel, to indicate at all times the height of the water in the boiler, as is usual in steam-boilers. A valve is placed on the top of the air-vessel, to allow of the escape of a portion of the air in case that the quality of the fuel should not require so much air for perfect combustion as the steam requires for good condensation. The degree of the condensation of the steam may be increased at pleasure, by increasing the velocity of the air passing into and through the air-vessel.

The other parts of my improved steam engine, such as the steam-pipes, the throttle valve, the safety valve, the vacuum valve, the working valves, crank, connecting rods, cross heads, pistons, piston rods, and various other minor parts common to engines in general use, may be made in the usual forms and placed in the most convenient situations. They cannot therefore need any description.

When it is intended to use water for condensing instead of air, my improved steam engine must be made as before described, except that the communication between the air-vessel and the fire-place must be closed, which may be done by a perfect ring of iron surrounding the opening leading to the fire-place, instead of the half ring before described, and a forcing pump must be employed to draw water from a reservoir, and force it into the vessel, which I have hereinbefore denominated the air-vessel, but which, in this mode of working, would more properly bear the name of water-vessel. In this case a blowing cylinder, the dimensions of which must be calculated according to the quality of the fuel to be used, may be worked to blow the fire through a pipe leading into the ash-pit. This however will not be necessary where there is a chimney high enough to create a strong draft.

In respect to proportions, my improved steam engine admits of considerable latitude, and it will be sufficient direction to any practical engineer to say, that for engines working with steam of 120 pounds to the inch, used expansively till it be nearly reduced to atmospheric strength and then condensed, a ten horse engine may have a fire-place of twenty inches diameter, the flue at the top ten inches diameter, and a boiler of ten feet high; a sixty horse engine, a fire-place of thirty-six inches diameter, a flue of sixteen inches diameter, and a boiler of twenty feet high.

In boat engines, and in other cases where height cannot be allowed, the diameter must be increased. The thickness of the two tubes constituting the boiler sides of a ten horse engine, may be one eighth of an inch. That of a sixty horse, a quarter of an inch, and so in proportion for engines of other power. The tubes constituting the condenser, and inner tube of the air-vessel, may in all cases be an eighth of an inch thick. The outer tube may be three-eighths of an inch thick to afford stability to the working cylinder, the blowing cylinder, and the forcing pump fastened to this tube, and as an ultimate perfect barrier against explosion.

The respective distances of the other tubes, constituting the outside of the boiler, the condenser and air-vessel, will be the same as hereinbefore given, and therefore their diameters will depend upon the diameter of the fire-place; the cap-piece in small engines may be half an inch thick, and in large engines an inch. The bottom of the ash-pit and bottom of the boiler must have about half an inch of thickness for every foot of diameter, or they may be cast with ribs to afford equivalent strength.

The fuel is supplied through a door in the flue at the top of the boiler, consisting of coke or coals, the least liable to swell with heat. The flue may be filled to about one-third of the height of the boiler, and the water fill about three-fourths of the boiler, leaving one-fourth for steam.

Having clearly explained my improved steam engine, so that any person competent to make a steam engine, can, from the description, understand my invention, and carry the same into effect in as beneficial a manner as myself, I proceed to observe, that the extreme safety of my improved steam engine will be seen from considering that in case the boiler should explode inwards into the flue, the power of the steam would be first reduced by filling the flue and fire-place, and could not escape through the chimney and fire doorway faster than it would diffuse itself and be condensed by mixing with the surrounding air, and thus lose all its force. But should the outside of the boiler burst, part of the force of the steam would be spent in filling up the interstices between the particles of the charcoal, and would then probably be too weak to effect a breach through the inner tube of the air-vessel, and should such a second breach be effected, the space within the air-vessel would allow the steam to expand and partly condense, and a portion to escape into and through the fire doorway, where it would divide itself, and proceed harmlessly up the flue and out at the doorway, so that the outer case being a reserve of strength would to acertainty withstand force remaining in the steam after the ,before mentioned successive reductions of power.

In witness whereof, &c.

Specification of the Patent granted to WILLIAM JESSOP, *of Butler Hall, in the County of Derby, Esquire, for certain Improvements in constructing Railways.* Dated June 1, 1833. [From the Repertory of Patent Inventions.]

To all to whom these presents shall come, &c.—*Now know ye*, that in compliance with the said proviso, I, the said William Jessop, do hereby declare the nature of my said invention, and the manner in which the same is to be performed, are fully described and ascertained in and by the following description thereof, reference being had to the drawing hereunto annexed, and to the figures and letters marked thereon: that is to say,

My invention relates to the manner of constructing the chairs in which the rails are fixed, that is, in place of the usual mode of fixing and supporting the chair upon a stone block, wood, or other sleeper, the chair is made distinct from the pedestal which is attached to the stone block, wood, or other sleeper, and the chair and pedestal are connected by a universal joint or hinge, which permits the pedestal to adapt itself to any irregular sinking of the block or other support upon which it rests, and insures a firm and solid bearing on its base; or this may be effected by the combined motion of a hinge-joint, or other means, permitting motion between the pedestal and chair, and a moveable joint formed at the junction of the chair and rail, so as to produce the same effect, and thereby answer the purpose of a universal joint.

DESCRIPTION OF THE DRAWING.—For the better understanding the improvements, I will now describe the drawing which represents several simple methods of constructing the universal joint, although it may be effected by other means familiar to the practical mechanic. R R are the rails. C C, the chairs. P P, the pedestals; and B B, the blocks or sleepers. J J are junction bars of cast or wrought iron, by which the opposite chairs are connected together, and the rails are thereby held parallel to each other, and at a proper distance apart, and are also retained in a suitable position to insure a flat bearing on the surfaces of the rails for the wheels to travel upon. S S are cast iron bed-plates or sleepers, which may be used to support the rails where stone is expensive, so constructed that the pedestal may be readily adjusted, by the introduction of a wedge or packing to a proper level, without disturbing the seat which the bed-plates may have acquired on the ground; the same method of construction being applicable to the pedestals, when they are attached to stone blocks,

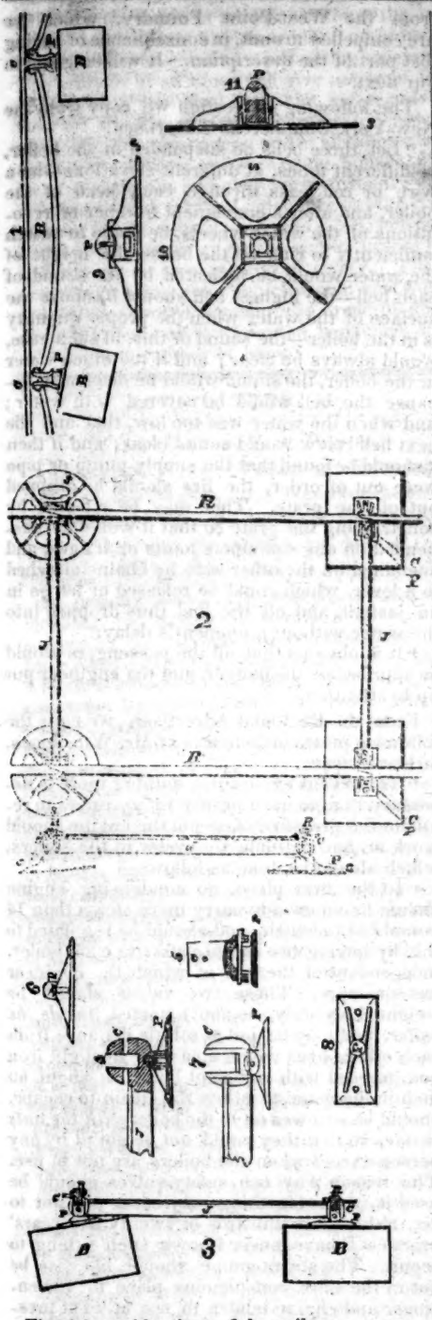


Fig. 1 is a side view of the railway.
Fig 2, the plan.
Fig. 3, the cross section; two of the stone blocks B are drawn in an inclined position, to show the action of the pedestal.

Figs. 4 and 5 are sections of the pedestal and chair, showing an obicular universal joint, by means of which, the pedestal adapts itself to any irregular sinking of the stone block or other sleeper, whilst the connecting or junction bars retain the rails in their proper gauge, and their opposite surfaces in the same plane or straight line.

Figs. 6, 7, and 8, are other views of the pedestal and chair.

Figs. 9, 10, and 11, are a side view, plan, and section of a cast iron bed-plate, used as a substitute for the stone blocks: showing also the method of adjusting the rails by means of wedges or packings introduced between the bed-plates and the base of the pedestal, which is made to fit in the recess formed on the bed-plate, and secured laterally by means of a wedge or key.

Having now described the nature of my invention, and the manner in which the same is to be performed, I would have it understood that I lay no claim to various parts shown and described, but do hereby confine my claim of invention of improvements in constructing railways, to the using of chairs and pedestals, which are capable of turning or moving an universal or other similar joints, as above described, whereby the railway will not be so liable, as heretofore, to be deranged by the sinking of the blocks or sleepers, whether of stone, wood, iron, or other material.

In witness whereof, &c.

Railroad Accidents.—The late unfortunate accident on the Camden and Amboy railroad has caused many remarks on the danger of railroad travelling.

Although we admit that there may be danger in travelling on railroads at *high* velocities, we still remain of the same opinion, often expressed in this Journal, that the danger is no *as* great on railroads as on steamboats, at least at equal velocities. We are desirous however, to do all in our power to prevent accidents in either case, and therefore, it is with great pleasure that we lay before our readers the following communication from E. L. Miller, Esq., a gentleman of much experience and reflection upon the subject of railroads and steam engines.

Danger of Travelling on Railroads. By E. L. Miller. [For the American Railroad Journal.]

Since the late fatal accident on the Camden and Amboy railroad, the danger of this mode of travelling has become a common topic of conversation, and a subject of frequent remark, in our public journals, and the inquiry from all quarters appears to be, is there no way of preventing the recurrence of similar accidents?

In the few remarks I propose to make on the subject, I have not the vanity to expect that I can offer any suggestions which may produce this desirable result; the most that I hope to effect, is to call the attention of those who have the more immediate superintendance of these works, to some mode of obviating the danger, if, as I believe, this desideratum be attainable.

Fortunately passengers travelling by this improved mode of conveyance are almost wholly exempt from the danger arising from the explosion of steam boilers; not that the boiler of a locomotive is less liable to explode, than the boilers of other engines, but the small quantity of water it contains, and the distance that the passengers are removed from the boiler, render them in a great measure secure from this source of danger.

The principal danger to be apprehended arises from the breaking of either the wheels or the axles, from obstructions on the road, or from passing the turnouts, and it must be very obvious that the danger in all these cases must be increased in proportion to the velocity. I have never been an advocate for travelling at a very high speed upon railroads, and believe that all their useful purposes may be as fully attained by a speed of twelve or fourteen miles per hour, as by the more dangerous one of twenty or thirty.

With regard to the wheels and axles, I have little doubt but a due attention to their construction would obviate most of the danger. Since the outside bearing on the axles has been adopted, in order to save friction, it has been common to reduce this part of the axle to an inch and a half, or an inch and three quarters in diameter. This would doubtless be sufficient if we could always be sure of the best quality of iron, and a perfect exemption from flaws, but as we can never be sure of these, would it not be advisable to sacrifice a little power to the increased resistance, and make the bearings of the axles 2¼ or 2½ inches in diameter! If this were done, and the axle, faggoted from the very best quality of iron, they would possess so much extra strength, as to render them *perfectly safe* under all circumstances, provided due attention were paid to keep them oiled.

With regard to the wheels, *cast iron should never in any case be used for passenger cars.* The altogether wrought iron wheels is doubtless the most safe. Next to this is the wooden wheel, with wrought iron rims, similar to those used on the Liverpool road, and adopted on the Camden and Amboy railroad. An interesting experiment is now being made on the Trenton road, of a new kind of wheel made of gun-metal, which is thought to possess so much tenacity as to render it safe from the danger of breaking, and if the abrasion is not too great, must be a very valuable improvement in wheels for railroad carriages.

The danger from obstructions in the road is in a great measure obviated by the guards which have been adopted on most of the engines, and as regards the turnouts, the only security lies in passing them at a very moderate speed.

Now, as it is well understood by those familiar with the subject, that the danger lies not in the simple act of the car getting off the road, but from its being forced on in this situation by the momentum of the train, and the power of the engine, until the car is literally broken to fragments, and the lives of the passengers endangered, I would suggest to those having the management of railroads, that much of the danger to be apprehended in such cases might be obviated, provided some plan could be devised for attaching the cars to the engine, and to each other, which when the resistance became increased in a certain ratio beyond that required to start or keep them in motion on the road, the car to which any accident might occur, should be self-detached from those which preceded it. This idea has been suggested to my mind from having witnessed two instances of cars getting off the road. In one of these, the cars were attached to the engine by a rope which broke the moment it met with increased resistance by the car getting off the road, and although this car contained thirty passengers, no injury was sustained except the breaking of the car. In this case I have not the least doubt that had the attachment of the cars to the engine been permanent, the car which was off the road would have been dragged on by the momentum, and the power of the engine, until it had been entirely broken to pieces, and most of the passengers killed or maimed.

The other instance to which I refer occurred under similar circumstances, with this exception, that the attachment of the cars to the engine was more permanent, and the result much more disastrous, the carriage being entirely destroyed, and several of the passengers maimed for life.

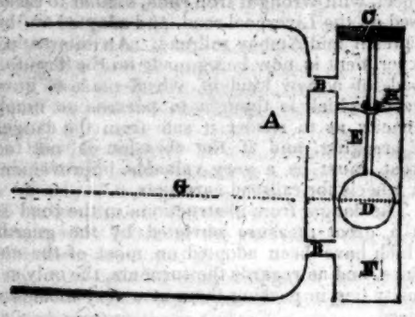
To obtain this important desideratum in attaching the cars to each other and to the engine, I have thought that a spring might be used which should operate so as to detach itself whenever the power of traction was increased to a certain point; the strength of the spring to be graduated in proportion to the working resistance, those next the engine being the strongest, and thus having a proportionate decrease of strength, to the end of the train. The importance of rendering this mode of conveyance, as safe as it is expeditious and convenient will, I have no doubt, call forth and enlist in its accomplishment the mechanical talent of the country, and it would afford me the highest gratification, if I could flatter myself that the suggestions I have here offered should in the smallest degree contribute to this desirable result.

E. L. Miller.

New-York, November 20, 1833.

[*From the Mechanics' Magazine.*]

STEAMBOAT SAFETY APPARATUS.—That the explosion of steam boilers often arises from an insufficiency of water therein is a fact too well established to admit of a doubt. Much ingenuity has been displayed in the various methods that have been suggested for giving early notice to the engineer and firemen whenever the water gets too low in a boiler. A sketch of a plan has been handed in to us by Mr. E. White, of this city: we submit it for the consideration of those more competent to decide on its merits and practicability than we pretend to be. Its cheapness and simplicity of structure are strong recommendations in its favor. This



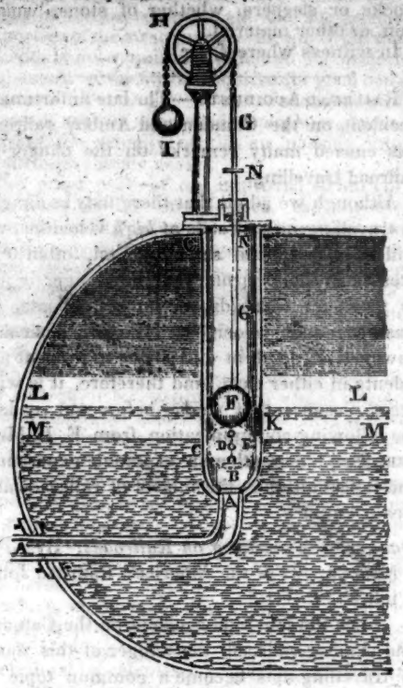
apparatus, denominated a *Tell-tale*, consists of a sheet iron or copper pipe, of about two to three inches diameter, marked in the drawing, F, closed at both ends, and attached in an upright position to the head of the boiler, A, and communicating therewith by the lateral connecting pipes, B B. The upright pipe having within it a floating metal ball, D, to which the valve rod E is attached. On the end of this rod is formed a papal valve, having its seat in the under side of the head of the pipe at C. H is a guide to keep the rod in its true position. It is apparent that the water in the pipe will always be on a level with that in the boiler, and that as long as the water in the boiler is kept to the water line G, the floating ball will prevent the valve rod from leaving its seat, but, on a fall of the water below a certain line, will also cause the float to fall, by which the valve will be opened, and the escape of steam will address itself to the *ears* of those intrusted with its management.

At the Franklin Institute, in Philadelphia, experiments are making, under the superintendance of Mr. Johnson, (who was appointed by a vote of Congress,) to increase the safety and certainty of steam boilers. All that is known at present of the result of their labors will be found at page 30, Vol. II, of this Magazine. Every friend of humanity must most heartily wish that their exertions may be successful, and if any of the suggestions on the subject elicited from our correspondents, now or at any future time, should in any way be of use to them, we shall be gratified; in the mean time we would call the attention of some of our legislators to the following fact:

"In England, every boiler of a steamboat is required by law to be tested quarterly, at three times the strength it is licensed to use. The safety valve is inaccessible to all except the officers of the government. Mark the result—since the regulation was adopted, *not a steamboat explosion has happened.*"

We have in the pages of this Magazine alluded more than once to this subject; descriptions and drawings of other plans will be found at page 153, Vol. I, and at pages 12 and 20 of Vol. II. It is occupying the attention of scientific persons of all descriptions. As it is a matter of the first importance, we shall introduce several other suggestions which have come under our notice; the first we extract from the London Mechanics' Magazine of May last.

"SIR,—The above sketch exhibits a plan of an apparatus for the supplying of high-pressure steam boilers with the necessary quantity of water, a desideratum which has for a considerable period occupied the attention of the scientific world. It is not my intention to place this before the public as a scheme not likely to be improved upon, but merely to contribute, as far as my abilities will allow, to the accomplishment of an arrangement in the economy of the steam engine, which is admitted by all to be of paramount importance.



"A represents the feeding pipe coming from the small water pump of the engine, which is made without a discharge valve. B, a valve placed at the bottom of the small cylinder, C, answering to the discharge valve of the small water pump (before mentioned.) C, a cylinder, having the valve B ground into the bottom of it, and to which is attached the pipe A. D, a chain connecting the valve B with the metal ball F. E, a dotted circle, which represents the ball F when the water in the boiler is low. F, a metal ball shown in the position of the boiler being full; this ball is suspended to a thin rod, passing through the stuffing box in the top of the cylinder. G, a slender rod, to which the ball F is attached, and which has a small chain or cord passing over the pulley H to the counter-balance I. H, a pulley, and I, the counter-balance, to which the ball F and valve B are suspended. K, an oblong hole, about two inches long and one broad, to allow the water to pass from the cylinder C into the boiler. L, the high water line, and M, the low water line, within the boiler. N N, two keys, to prevent the rod going too high or descending too low within the cylinder.

"The action is as follows: The small water pump is continually at work from the engine; but, as the apparatus now stands, there will be a free communication between the boiler and the cylinder of the pump; therefore, each time the piston ascends, instead of the water rising from the well, a quantity will proceed from the boiler through the valve B, and back again into the boiler with the descent of the piston; nor will the water ever increase upon the boiler till it shall have evaporated down to the line M, when the ball F will descend to the dotted circle E, on which the valve B will fall into its seat, and act as the discharge valve to the small pump, until the water shall have risen high enough to float the metal ball F to its present position, when its action will cease. To adjust the counter-balance to the ball F, it should be of equal weight, subtracting the weight of an equal bulk of water, and the pressure of the steam upon the area of the rod G. The oblong hole is limited to the difference of the height of the water in the boiler.

"Yours, &c. E. F. W."

We have another plan, with an engraving, from the West-Point Foundry, which we are compelled to omit, in consequence of having lost part of the description. It will be given in our next.

The following suggestion we copy from the New-York Commercial Advertiser:

"Let three bells be suspended in the boiler, of different tones, at different elevations—let a wire or rod pass through each head of the boiler, and after a convenient number of revolutions of the water-wheels, be made to twitch sufficiently to ring all the bells—the height of the water would be indicated by the sound of each bell—the highest bell should be above the surface of the water when the proper quantity is in the boiler—the sound of this, in such case, would always be clear; and if too much water in the boiler, the sound would be deadened, because the bell would be covered with water; and when the water was too low, that and the next bell below would sound clear; and if then it should be found that the supply-pump or pipe were out of order, the fire should be dropped out of the grate. This may be effected by constructing the grate so that it would be suspended on one side upon joints or hinges, and sustained on the other side by chains attached to a lever, which could be released or let go in an instant, and all the fuel thus dropped into the water without a moment's delay.

"It is obvious that all the passengers would be apprised of the danger, and the engineer put up to attention."

From the Rockland Advertiser, we copy the following pertinent remarks of Mr. Wm. Jones, of Haverstraw:

"To prevent explosions, nothing more is necessary than to have proper *safety-valves* to regulate the pressure of steam the engine should work at, and regulate the water in the boilers, which should be done as follows—

"In the first place, no condensing engine should be allowed to carry more steam than 14 pounds to the inch, and should be regulated to this by having *two safety-valves* to each boiler, independent of the one of which the engineer has the care. These two valves should be weighted properly, as above named, *inside the boiler*, and may be put at a little distance from each other, over which a cast or wrought iron box, pierced with sufficient holes, of about an inch in diameter, to allow the steam to escape, should be screwed on to the boiler *with the nuts inside*, so that they could not be got at by any person except when the boilers are not in use. The reason why *two* safety-valves should be used is, that something may cause one not to act, although in upwards of twenty-five years' practice I have never known such a thing to occur. The steam-gauge should likewise be put in the most conspicuous place for the engineer and engine-tender to see at what pressure the steam is in the boilers, in case something may cause the valves to be inactive, which is almost impossible.

"It is also necessary that the water in the boilers should be regulated, so that the engineer and engine tender should know when there is too little in them, as many boilers have burst for want of a proper quantity. To prevent this, a valve should be placed on all boilers with *a float inside*, which will follow the water as it fluctuates. In this valve a whistle should be placed, that will give notice the moment the water is getting too low in the boiler, so that the engineer and all persons belonging to the boat will know the water is getting short, as it will continue whistling till the water gets to its proper quantity.

"Many persons may say, all boilers have safety-valves, and cocks to regulate the water in the boiler. I admit it. In the first place, however, the safety-valve on the top is a lever, exposed to the engine-tender or any other person, who may go and remove the weight to any place he chooses, which I have seen done to crowd the engine with steam to no purpose except a bad one, and at a time when the piston has wanted packing, or the air pump, and at times when the valves have not worked regu-

larly. In the next place, there are cocks to tell the height of the water. These cocks will not tell when the water is too low, without the aid of the engineer or engine-tender; nothing in this case can be equal to a self-acting machine. The whistle at all times will give notice of the water being too low, and the safety-valves blow off the steam when there is too much, when landing passengers, and at all times when there is too great a pressure in the boilers. In fact, no engine is complete without them; and it would be well for the Legislature to take cognizance of the subject, and pass a law, not permitting any boat to go on the water, unless fitted with these two means of safety. These two things being done, which would cost but a few dollars, would prevent the dreadful accidents that have of late so often happened, and save a great number of lives."

AGRICULTURE, &c.

[*From the New-York Farmer.*]

AMERICAN WINE: *Power of Knowledge.*—Mr. Sidney Weller, in a communication to the American Farmer, gives his testimony in favor of agricultural information derived from reading. He speaks frankly, not egotistically.

In making wine, this season, I used for mashing the grapes such rollers as are described by Mr. Herbemont, and that they have fully answered the purpose he named. And I will state too, that my grapes being fully ripe and some partly shrivelled, the must, when I came to taste its strength with an egg, was found sufficiently strong to make wine without the addition of either sugar or brandy. I have no doubt of its keeping if due care be taken; for some I made in the same way, more than three years since, is now good wine, or pronounced such by competent judges.

Nearly four years since I removed to my present residence,—and with very narrow resources, commenced improving my three hundred acres of nearly worn out land. Not to mention the cost and trouble of fencing and other repairs of a common kind on a farm in a state of dilapidation, I pursued a regular system of manuring, by hauling straw, pine and other leaves, into my yards and lots, and having my trash pens and other receptacles for making manure. Some, who thought my labors almost lost, seeing barren fields thereby made to produce good cotton and corn, now adopt the same plan, and consider it less trouble to make poor land productive by manure, than to clear new timbered tracts after the old syetem.

Some have now changed their opinion, who formerly considered me a visionary man, about to ruin my affairs, because I went to the expense and trouble of buying and sowing grass seeds, made cross fences, and took my cattle out of the woods to turn them into fields, and because I fed my calves milk and gruel in pasture lots, instead of letting them remain with their dams; and not to mention new instruments of husbandry, such as harrows, rollers, skimmers, &c. because I ploughed hilly ground horizontally, and planted corn in drills; seeing my grapes flourish, my cattle thrive, and that two or three of my cows afford more milk and butter than a dozen or two of theirs, and that my calves bid fair to become superior cattle, and that my grounds produce more, and washing is prevented by the horizontal and drill system.

But my attempts to rear a vineyard at first excited here the greatest incredulity. But few attempts of the kind have been made in this state, and if I have been informed correctly, none of consequence in the county of Halifax. And yet a county, I believe, as to soil and climate, as well calculated for success in rearing the vine as any in the Union. Some thought it impracticable, on my poor land, to make vines flourish at all; and again, if the vines could be reared, the business would be unprofitable, and if entered into any way largely, would ruin even a man of capital.

And indeed the expense of hiring, connected with this and other improvements, brought me into debt and some embarrassment. And I know not the consequence, had not Providence, who uniformly favors all laboring to avail of and make his own nature's works valuable to man, afforded me a substantial friend, in my neighbor, Gov. G. H. Burton, a gentleman of enlarged benevolence, extensive information and liberal views—for taking me by the hand, purchasing my rooted vines, and liberally rewarding me for superintending the rearing of a vineyard for him, he shared with me some of the illiberal remarks incurred by the new, and here untried, undertaking. But, incredulity is beginning to give place to faith, in view of the rapid growth and promising condition of our vineyards. And many that were incredulous, think now that rearing the vine will eventually be a profitable business; knowing that, independent of the expected profit of wine making, I have sold rooted vines these two years to some amount, and that (with a fair prospect of selling,) I will have a considerable number of Scuppernong and other choice kinds of rooted vines to be disposed of this fall, or next spring.

Here I remark, that at every step of my efforts to attain agricultural improvements, I have been more convinced, that emphatically, in agriculture, *knowledge* is, when judiciously applied, *power*; or, that the more correct and enlarged the *theory* or *science* in this business the more efficacious and eventually profitable the *practice*. And here I must acknowledge myself greatly indebted to the pages of the "American Farmer": from which *pioneer* of agricultural periodicals, I have been constantly receiving important hints and directions. I heartily accord with Mr. Smith, (late editor of the "Farmer,") in his valedictory, that the agriculturist, as well in these as in other important pursuits of life, should read much on the subject of his business. But to persuade most agriculturists to accord practically with this sentiment is a difficult task. Some, indeed, I know, look upon the agricultural periodicals of the day as a sort of newly arisen *catch pennies* to gull them out of money.

PROFITS OF FARMING.—It is often the case that men in mercantile, manufacturing, and mechanical pursuits, are reputed to be worth much more property than they really possess. We fully believe that extensive statistical information on the relative wealth of merchants and farmers would show results favorable to the latter. The following is from the Poughkeepsie Journal.

MR. EDITOR,—The business of farming is often considered less profitable than other business; and the reason is, that the income of the farm is not truly estimated. If the entire revenue of a well regulated farm were estimated, we should find the per cent. on the property not less than that of any property, that is equally safe.

My neighbor B. came to me the other day, quite discouraged on account of the small profits of farming compared with other business. Now, as I knew my neighbor to be a good farmer, and a pretty correct calculator, I attempted to convince him, from his own statements, that he is enjoying a very fair per cent. from his farm. He has a small well-improved farm, which, two years ago, was bought for $7,500; since which he has built a house that cost $1000, which, with his entire stock, &c. makes his property worth $10,000. From this my neighbor complained, that he realizes only a few hundred dollars, not more than — per cent.

But there are many things not counted which ought to be reckoned as part of his income. His house, as I said, though not necessary to the business of farming, besides the one he already had, yet agreeing well with the circumstances of his family, may be considered as yielding at least $60. Besides the team, wagons, &c. necessary for his farm, he keeps a good pair of horses and pleasure-waggon, because, you know, his wife and daughters must ride in a style that is agreeable to their circumstances and standing in society. The value of these, counting it equal to the expense, is not less than $140 per annum. And of wood, my neighbor tells me he burns more than 30 cords, which at $3 per cord is $90. Then, his garden, orchard, and fruit yard, for all these are managed in the best manner, yield him the value of $80, including his cider, &c. In addition to these we might mention the veal, the poultry, and the eggs, and the fine piece of mutton that he has now and then; for, as the Irish lord says, "he lives on his own estate and kills his own mutton." All these, though not generally estimated, are a part of the income of his farm. So here is more than $370, in addition to the four hundred which he acknowledges to have received in cash as the clear income of his farm. It is true that this is for the comforts, &c. of my neighbor's family, but such as they require, and such as, in any other business, would cost the cash. My neighbor was satisfied. And I am persuaded, Mr. Editor, that a careful examination of *facts* would lead to conclusions very favorable to agriculture. And your readers would welcome a statement of these conclusions in your paper.

ARITHMOS.

PLOUGHING WITH THREE OXEN.—The following, from the Genesee Farmer, appears worthy the notice of those farmers who work oxen. Mr. Lacy, the writer, is spoken of as a good and thorough-going farmer.

Believing it to be the duty of every member of community to lend his aid, however feeble, in maturing and suggesting new and useful improvements, (by which means all arts and sciences have by degrees attained their present state of perfection,) induces me to communicate at this time the successful result of an experiment in the use of three oxen abreast in ploughing, which team may be drove by the man holding the plough, and the draft being apportioned to each ox equally, by means of a whipple-tree, they are not subject to unequal pulling as two yoke, from unskilful and violent driving, and lose no power by pulling from the tops of the neck, or of one yoke being removed too far from the plough, which increases the burden of the hind yoke, without any benefit to the business.

I put one pair of oxen in a common yoke, and the third ox in a single yoke made quite crooked. To the end of the double yoke I attach by a staple a chain of three or four links and a hook. To the end of the single yoke, also, a chain of about twenty inches in length is attached, of the size of a common trace chain, which is quite sufficient to unite the team.

The singe ox draws in traces hitched from the underside of the yoke to a short whipple-tree, attached to the long end of a three ox whipple-tree, which may be shorter than is used for horses.

I have a plough constructed purposely for this team by Kellum & Bingham, of Wheatland, in such a manner as to answer for two or three oxen. For three oxen the pitch should be taken entirely out by means of a key to raise the beam tenon in the plough handle, the mortice being wider than the tenon, and to set the plough on or off the land, the mortice in the beam through which the sheath passes should admit of a wedge an inch thick by the side of the sheath, by means of which the plough may be set to or from the land; in consequence of the wide mortice, an iron key through the sheath will be required.

Whoever may be induced to use a three ox team will find after a short trial that they work pleasantly, and perform the amount of labor full equal to two yoke in the common way with a skilful driver. ALLEN T. LACY.

Chili, Oct. 10, 1833.

PRICE OF FARMS.—It is very evident that landed property is advanced in price by the general prosperity of the country, and from speculation. We caution farmers, however, not to come under the influence of the land mania. A few weeks ago Mrs. Parmentier's garden, of 23 acres, was purchased for $57,000. It has since been sold in building lots, at, we understand, an advance of 25 per cent. Perhaps the following are similar purchases:

We last week mentioned the sale of the Thompson farm at 80 dollars the acre. We understand the purchaser has already been offered and refused *twenty-five hundred dollars* for his bargain.

A farm, one mile from Norristown, Penn., of 145 acres, was sold on the 17th ult. for $152 per acre. The purchaser has since refused $5000 for his bargain. Norristown is a small village, situated on the Schuylkill river, 17 miles from Philadelphia.—[Poughkeepsie Journal.]

Several acres of woodland at Valley Grove, three miles from Brooklyn, adjoining the turnpike, were lately sold by G. L. Martense, at five hundred dollars per acre. Two acres, owned by Mr. M. Clarkson, in the same neighborhood, three and a half miles from the ferry, sold for one thousand dollars per acre.—[Brooklyn Star.]

COCOONS TO THE POUND.—At page 339 it is stated that 1000 balls of good cocoons will make one pound of twisted silk. In a recent conversation with Mr. Brooks, he states that his estimate was too small, a pound requiring from 1500 to 2000. The last number, however, was the basis of our calculation. The price, too, was stated to be three dollars per bushel. Those of very good quality will command four dollars.

SAXONY SHEEP.—By the following we perceive our correspondent, "a Native of Saxony," has made a sale to the Hon. Henry Clay. We take this opportunity to request Mr. G. to remember us during these long evenings.

Mr. Grove, an extensive wool grower in the town of Hoosick, has a flock of fine Saxony sheep, of superior blood and quality. Henry Clay, becoming familiar with their merit, made application to Mr. G. for a few to improve his stock. *Fifteen* have consequently been sent. They were shipped at this city for Baltimore last week.—[Troy Press.]

FLORIDA ORANGES.—We learn that Florida Oranges are in unusual demand in the northern markets. So great has been the desire to obtain them, that already one half the crop on the St. Johns has been taken away. The crop at St. Augustine probably amounts to 2,000,000, and are ripening very fast, and will be fit for market soon.

The superiority of the Florida Oranges over those of foreign growth is fully admitted, and it only needs a little more attention and enterprize to supercede the use of the former altogether.—[Florida Herald.]

REMARKS.—Florida Oranges retail in the streets of New-York at 25 cents per dozen. They are not considered quite as sweet as those from tropical climes, but have a fresh appearance and pleasant flavor.—[ED. N. Y. F.]

ORCHARD GRASS.—The graziers of the valley pronounce it more nutricious than either Timothy, Clover, or Herds Grass, and it is by uniting this grass with the two first that the proverbially fine pastures and meadows of the central counties of Pennsylvania are found. It resists the heat of our summers, and recovers from the effects of the hoof and the tooth very rapidly. For seed lots two bushels should be sowed to the acre; and for the scythe, or for pasture, the mixture should be one bushel of orchard grass and one gallon of timothy seed, over which a gallon of clover should be scattered in March.—[Kanawha Banner.]

CAPT. RILEY, so well known to the public by the account of his sufferings while a captive among the Arabs of the African desert, as well as for his benevolent character, has recently returned from a voyage to Mogadore, and presented to the American Colonization Society *twelve bushels of Barbary wheat*, in hopes that it may be better adapted to the soil of Liberia than the grain of this country. This wheat is thought the best in the world, and flourishes in a climate where frosts are never known. Should it suit the Liberia climate, it must prove a most valuable grain for the colony.

THE FIRST WHEAT IN NEW ZEALAND.—The difficulty of introducing the greatest improvements among people who need them most, is prettily illustrated by Williams' account (in the vegetable world), of the manner in which wheat was first cultivated in New-Zealand by a native chief who had visited the English settlements in New-Holland. On leaving Port Jackson the second time, to return home, he took with him a quantity of it, and much surprized his acquaintances by informing them that this was the very substance of which the Europeans made biscuit, such as they had seen and eaten on board of their ships. He gave a portion of it to several persons, all of whom put it into the ground, and it grew well; but before it was well ripe, many of them were impatient for the produce; and, as they expected to find the grain at the roots of the stems, similar to their potatoes, they examined them, and finding no wheat under the ground, all except one pulled it up and burned it.

The chiefs ridiculed Duaterra about the wheat, and all he urged would not convince them that wheat would make bread. His own crops and that of his uncle, who had allowed the grain to remain, came in time to perfection, and were reaped and threshed; and, though the natives were much astonished to find that the grain was produced at the top, and not at the bottom of the stem, yet still they could not be persuaded that bread could be made of it.

A friend afterwards sent Duaterra a steel mill to grind his wheat, which he received with no little joy. He soon set to work before his countrymen, ground some wheat, and they danced and shouted with delight when they saw the meal. He afterwards made a cake, and baked it in a frying-pan, and gave it to the people to eat, which fully satisfied them of the assertions. From this time there was of course no difficulty in making the culture a fashionable one.—[Poulson's Daily Advertiser.]

ELEPHANTS FOR PLOUGHING.—Elephants are now used in Ceylon for ploughing the rice fields, and in preparing new ground for the cultivation of coffee, pepper, &c. An elephant will perform the work in one day which twenty bullocks were in the habit of performing before. In a country like Ceylon, which is very thinly inhabited, by this system of employing Elephants, much time is saved, and a great deal of agricultural work performed. An Elephant may be purchased in Ceylon at any time for 10 or £15.

CULTURE OF POTATOES.—A frequent change of seed is necessary. Any sort may be continued fertile and profitable by removing them from one county to another every fourth or fifth year, or by raising them alternately on very different descriptions of soil. In the cultivation of this useful plant, it appears from many experiments that it requires ample space. In field culture, placing the sets of the strong growing kinds in every third furrow, and those of the dwarfer sorts in every second, are eligible distances. There are different opinions held respecting the necessity of earthing up potatoes. On very thin soils, however, it is absolutely necessary. On deeply ploughed, or trenched ground, earthing up the stems is certainly less necessary, because as the under ground runners, which produce the tubers, are inclined to extend themselves as deeply in the soil as the roots, they do not seem to require any additional depth of earth immediately over them. But this depends entirely upon the open porousness of the soil, and the manner of growth of some of the kinds. Plucking off the flowers increases the size and number of tubers. It is founded on a law of nature, disposing a plant, constituted to produce at the same time both seeds and tubers, to yield either one or the other more abundantly, according as either is destroyed. If tubers be not allowed to form, many flowers and apples will be the consequence; and if the flowers be destroyed as soon as they appear, the tubes will be increased. It is bad management to plant the refuse, or odds and ends of last year's crop, for the sets of this. If potatoes are planted at all, they should be planted well.—[Br. Far. Mag.]

OBSERVATIONS ON TRANSPLANTING TREES.—As success in transplanting trees depends much on the treatment they receive in that operation, we have thought it advisable to present a few remarks for the observation of those who have had but little experience on the subject. On removing trees from the nursery, care should be taken to prevent the roots from dying previously to planting them, otherwise they may receive considerable injury, and in executing our orders for trees, particular care is taken to preserve them from drying winds before packing. Immediately on their receipt the bundles should be unpacked, the roots well watered and "laid in," until the ground in which they are to be planted be ready to receive them. By laying in is to be understood the making of a trench sufficiently large to admit the roots, into which they are placed: the earth having been previously made fine, is then filled in around them, and a gentle watering given, in which situation they may remain with safety until planted. The holes in which it is intended to plant them, should, for an ordinary sized nursery tree, be from 2½ to 3 feet in diameter, and about the same in depth; the earth from the bottom should be thrown aside; and its place filled up with good compost or black mould, (no fresh stable manure should be used in the compost.) The tree should be planted one or two inches deeper than it stood in the nursery; the roots and fibres being spread out horizontally, and during the process of filling in the earth, the tree should be shaken several times, so as to admit the soil between the roots, and also fill up any cavities that might otherwise remain. The earth should then be trodden down and gently watered; in a short time it will have settled, and any hollows that may have formed should be filled up—finishing by forming a basin around the trunk to receive the rain or watering which it may be necessary to give it, if the ensuing season should prove dry; to prevent the winds from loosening the earth around the roots, they should be secured to a stake by bands of straw.

The proper season for transplanting trees in this latitude is from the middle of October until the first or middle of May, during which time they may be safely transported; when they are destined for the south, the autumn and winter months, perhaps, are preferable, but when for this latitude, or northerly, spring and autumn are equally good—evergreens are thought to succeed better when transplanted in the spring; much however depends upon the nature of the soil; if heavy, we would in general prefer the spring. Bulbous and other flowering roots, such as hyacinths, tulips, ranunculus, anemone, crocus, &c. &c. are taken out of the earth in June, from which time to November or December they can be transported without risk.

Green-house plants can be transported by water, and for short distances by land, at almos

any season, though the autumn, winter, and spring months are preferable, as they may then be closely packed, and require no attention on the passage.

WASTE OF CORN IN AGRICULTURE.—It is estimated that only one-third of the seed-corn sown on the best land grows; the other two-thirds are destroyed. The number of cultivated acres in Great Britain and Ireland amounts to 47,000,000; 30,000,000 of which are under the plough. Two-fifths of the latter, or 12,000,000 acres, are annually under the cereal crops. The average allowance of seed for the three kinds of corn may be stated at four bushels and two-thirds per acre. The quantity of seed annually sown thus amounts to 7,000,000 quarterly. If two-thirds of this quantity are rendered unproductive by some agency which has hitherto been uncontrolled, then 4,666,666 quarters of corn are annually wasted! The quantity thus lamentably wasted would support more than 1,000,000 of human beings. —[Quarterly Journal of Agriculture.]

RAILROAD MEETINGS.

[From the Long Island Star.]

At a meeting of delegates for the several towns of Suffolk county, held this day, pursuant to notice, at the house of William Griffing, in Riverhead, James Hallock, Esq. of Southold, was appointed chairman, and William F. Blydenburgh, secretary: it was

Resolved, as the sense of this convention, That a railway from Williamsburgh, or Jamaica, through the Island, to Greenport, &c. is both desirable and feasible.

Resolved, That the inhabitants of Kings and Queens counties be invited to appoint delegates to meet delegates from this county, in convention, at the inn of Thomas Hallock, in Smithtown, on the first Tuesday of December next, at 10 o'clock P. M. to concert and adopt measures in reference to a railroad through the Island.

Resolved, That Gilbert Carle, Wm. Wicks, Moses Rolph, Silas Wood, Platt Carle, Josiah Bowers, William F. Blydenburgh, Abraham Smith, George S. Phillips, William N. Mills, J. B. Smith, Richard Blydenburgh, Tredwell O. Scudder, H. W. Vail, Eliphalet Smith, Richard Udall, James H. Weeks, S. B. Strong, R. W. Smith, L. H. Davis, J. M. Williamson, Brewster Woodhull, Charles Osborn, Dr. J. Fanning, George Miller, Noah Youngs, Chapman Davis, Jr., John Clark, 3d, B. S. Wiggins, J. H. Goldsmith, Caleb Dyer, S. S. Gardiner, S. B. Nicoll, John P. Osborn, A. S. Rose, S. T. Griffing, Jonathan S. Conkling, Samuel Miller, B. F. Wells, Israel Fanning, and David Gardiner, be the delegates from Suffolk county to the above convention.

Resolved, That a committee of three be appointed by the chairman, to copy and enclose to the inhabitants of Kings and Queens counties the above resolutions. The chairman having appointed Elijah Terry, Joshua Fanning, and W. F. Blydenburgh, as such committee. it was

Resolved, That the subscriptions for a survey, by a competent engineer, to ascertain the most elegible route for a railroad through the Island be continued.

Resolved, That the above resolutions be signed by the chairman and secretary, and published in all the newspapers printed on the Island.

JAMES HALLOCK, Chairman.
WM. F. BLYDENBURGH, Secretary.

[From the Milledgeville, Geo., Journal.]

Pursuant to appointments of public meetings of the citizens of Savannah and Macon, committees representing such citizens convened in the Senate Chamber on Thursday evening, Nov. 7th 1833, for the purpose of devising such plans as may be most expedient for establishing an internal communication between said cities, and extending to the town of Columbus.

Present from Savannah, John McPherson Berrien, W. W. Gordon, and W. C. Daniell, Esqrs.

From Macon, C. J. McDonald, Henry G. Lamar, Robert A. Beall, Robert Collins, John Rutherford, and Nathan C. Munroe, Esqrs,

The meeting organized by calling Judge Berrien to the Chair, and appointing N. C. Munroe secretary.

The following resolutions were adopted and the meeting adjourned subject to the call of the chairman.

It being important that a survey of the country for the purpose of a canal or railroad communication between the cities of Savannah and Macon, and between Macon and Columbus, be made by a competent Engineer, at as early a period as possible, and the season of the year being that best adapted for the purpose: Resolved, that an application be made by this joint committee to the legislature for the appropriation of the sum of $20,000 to defray the expenses of such survey, and that the necessity of an early appropriation be strongly urged on the legislature, that the contemplated survey may be made before the expiration of the proper season.

Resolved, That a committee be appointed to confer with such gentlemen as are now in attendance at Milledgeville, and who are interested in the contemplated railroads from Augusta to various parts of the interior of the state, for the purpose of reconciling, as far as possible, conflicting interests and views, and to produce a union in such a scheme as will most conduce to the general prosperity of the state.

Resolved, That a committee be appointed to draft a memorial to the legislature for a charter to such persons as may think proper to associate for the purpose of erecting a railroad or canal from the city of Savannah to Macon, and from the latter place to Columbus, and also to prepare a bill to accompany said memorial, and that the same be submitted to this joint committee.

The following gentlemen compose the several committees:

On the first resolution, Messrs. Berrien, Gordon, and Beall.

On the second, Messrs. Berrien, Gordon, McDonald, Lamar, Collins, Rutherford and Munroe.

On the third, Messrs. Lamar, McDonald, and Gordon.

METEOROLOGICAL RECORD, KEPT IN THE CITY OF NEW-YORK,

From the 5th to the 18th of November, 1833, inclusive.

[Communicated for the American Railroad Journal and Advocate of Internal Improvements.]

Date.	Hours.	Thermometr.	Barometer.	Winds.	Strength of Wind.	Clouds from what direction.	Weather.
Novem. 5..	6 a. m.	29	30.55	NNE—N	moderate		
	10	32	30.57	N	light		clear
	2 p. m.	40	30.53	..	..	NNW	fair
	6	38	30.50	..	..	..	..
	10	35	30.48	..	..	..	..
" 6..	6 a. m.	35	30.36	WSW	..	..	..
	10	38	30.36	SW by W	..	W	cloudy
	2 p. m.	44	30.27	..	..	..	..
	6	42	30.22	..	..	..	..
	10	42	30.20	SW	moderate	..	..
" 7..	6 a. m.	41	30.25	..	..		fair
	10	47	30.25	..	light		..
	2 p. m.	52	30 26	..	..		clear
	6	51	30.26	S by W	..	SSW	fair
	10	50	30.28	..	..	W by N	cloudy
" 8..	6 a. m.	48	30.30	SSW	..	..	..
	10	54	30.28	..	..	WSW	fair and smoky
	2 p. m.	60	30.24	S—SSE	..	..	..
	6	58	30.18	SSE	..	W by S	..
	10	38	30.15	SW	..	..	..
" 9..	6 a. m.	57	29.00	WSW	moderate	..	.. —haze at WNW
	10	60	29.95	..	..	..	cloudy
	2 p. m.	60	29.80	..	fr'h—strong	..	..
	6	59	29.72	..	fresh	..	..
	10	56	29.69	..	..	SW by W	rainy, and clouds brisk by SW by W
" 10..	6 a. m.	49	30.95	WSW—WNW	..	..	cloudy
	10	53	30.00	WNW	light	..	..
	2 p. m.	57	30.01	W—WSW	moderate		clear
	6	52	30.06	WSW	light		..
	10	49	30.11	..	..		..
" 11..	6 a. m.	45	30.17	..	..		..
	10	50	30.16	SSW	..	W by S	fair
	2 p. m.	58	30.10	S—SSE	..	WSW	..
	6	52	30.00	..	..	..	cloudy —rainy
	10	53	29.88	S	..	..	rain
" 12..	6 a. m.	47	29.71	SW	moderate	..	rainy
	10	58	29.68	WSW—W	fresh	..	cloudy
	2 p. m.	60	29.70	W	gale	..	.. —rainy
	6	52	29.82	..	strong	..	fair
	10	45	29.90	WSW	..		clear
" 13..	6 a. m.	41	29.97	.. —W by S	moderate		..
	10	46	29.99	W	strong		..
	2 p. m.	50	29.98	W—WSW	fresh	WNW	fair
	6	47	29.98	WSW	moderate	..	..
	10	45	29.99	..	..		clear
" 14..	6 a. m.	42	29.90	SSW	..		..
	10	51	29.85	.. —S	..		..
	2 p. m.	58	29.75	S	fresh	SW	fair
	6	54	29 65	..	moderate	SSW	..
	10	49	29.58	..	light	..	..
" 15..	6 a. m.	43	29.48	WSW	moderate	..	..
	10	44	29.50	..	..	..	cloudy
	2 p. m.	47	29.54	..	..	.. —WSW	rainy —fair
	6	44	29.58	..	fresh	WSW	..
	10	40	29.69	..	..		clear
" 16..	6 a. m.	33	29.77	..	moderate		..
	10	39	29.80	SW by W	..	..	fair —clear
	2 p. m.	43	29.79	WSW	..	SW	..
	6	36	29.80	..	fresh	..	fair
	10	34	29.84	SW by W	..	SW by W	..
" 17..	6 a. m.	32	29.84	..	..	..	..
	10	36	29.84	WSW	..	..	..
	2 p. m.	41	29.78	..	..	WSW	.. —squally
	6	39	29.76	..	moderate	..	..
	10	38	29.88	..	..	..	..
" 18..	6 a. m.	35	29.98	..	..	..	..
	10	41	30.04	SW by W	..	..	clear
	2 p. m.	44	30.05	WNW—W	..	NNW	..
	6	40	30.12	W	..	W	fair
	10	36	30.18	..	..	W by S	..
				..	..	WSW	..

NEW-YORK AMERICAN.

NOVEMBER 16, 18, 19, 20, 21, 22—1833.

LITERARY NOTICES.

THE LIFE OF ARCHBISHOP CRANMER, by C. W. LE BAS. 2 vols. New York: J. & J. HARPER.—We are glad to see this continuation of the *Theological Library*, of which these volumes constitute No's 5 and 6 of the series.

The character of Cranmer is one that has been extolled and depreciated immoderately, according to the religious tenets of those who discuss it. The aim of Prof. Le Bas in these volumns—while giving all the material facts in the history of Cranmer, the Primate of three reigns, accompanied by the expression of his own sense of gratitude as a member of the Church of England, to the great founder and champion of that Church, and the early advocate of the general distribution of the Bible in the English tongue to all classes—is to leave to his readers the materials and opportunity of forming their own judgment.—The career of Cranmer, and his dangerous association with Princes, exposed him to great temptations and difficulties; and if he did not always—especially in the matter of the marriages and divorces of that monster of lust and blood, Henry VIII—acquit himself as became a Christian minister; and although on the approach of a painful death, his truth and courage faltered for a while—there was that in his fervor, sincerity and zeal, in the devotion of his life to the great object of his calling—the inculcation of the truth as it is in the Scriptures—and in the courage and calmness of his death, to entitle him to the gratitude and admiration of the whole Protestant world. Of that cruel death we subjoin the story, as it is told by our author:

We now proceed to the consideration of the archbishop's conduct in the closing scene of his eventful life.

The sixth paper of submission was dated on the 18th of March. It contained a prayer for mercy; and the answer to this petition was an order for his almost immediate execution. From the very first it had been determined that he should suffer as a heretic; but his enemies waited awhile, that they might fix upon him the infamy of cowardice and unfaithfulness; and when artifice and temptation had done their worst, the fire was speedily lighted for his destruction. By way of preparation for the solemnity, the provost of Eton College, Dr. Cole, had secret instructions from the queen to prepare a sermon for the occasion; and, lest the feelings of the people should break out into violence and tumult, many of the neighboring gentry and magistrates were assembled in Oxford, with their servants and retainers, to keep the peace and witness the execution. On the 20th of March, the day before he suffered, the archbishop was visited in his prison by Dr. Cole, and interrogated by him, whether he continued firm in the Catholic faith, as he had recently professed it? The answer of Cranmer was somewhat equivocal. He said that, by God's grace, he would be still more confirmed in the *Catholic* faith; a reply which most probably intimated that he had begun to repent of his weakness, and to form a resolution to return to the profession which he had seemingly abandoned. How the interval between that time and the day after was passed by him, we have no certain information; but it is at least likely, that it was employed in preparing the prayer, the exhortation, and the repentant confession of apostacy, which were actually delivered by him immediately before his execution. On the next day, Saturday, the 21st of March, he was again visited by Cole at an early hour, and asked by him whether he was provided with money. Being answered in the negative, Cole supplied him with fifteen crowns; an indirect, but very intelligible mode of apprizing him that he must prepare for death; it being then a sort of funeral custom for persons condemned to die, to distribute alms among the people. This intimation must, in all probability, have dissipated every hope of mercy, and have convinced him that the time was come for publicly abjuring the dissimulation which had wounded his conscience and his fame, without preserving his life. Some time after Cole had retired, the friar Garcina made his appearance in the prison and urgently besought him to transcribe a retraction of his doctrine, to be delivered by him at the stake. It is uncertain whether the document thus tendered to him was the *fifth* of the submissions ascribed to him in Bonner's printed account, but which as we have seen had hitherto been suppressed by the council; or whether (which is the more probable supposition) it was nothing more than the brief revocation of his doctrine respecting the Eucharist, which, in the printed account of his submissions, is called "the saying of Thomas Cranmer, a little before his his death." But however this may be, it appears that Cranmer consented to transcribe it, and thus to leave the friar under the impression that it was his intention to deliver it before the public, when he came to execution. In this, undoubtedly, there was some appearance of deception; but it was an expedient to which he was almost driven by the necessity of the case. He well knew, that if he had *then* rejected the proposed paper, and had apprized Garcina of his design to revoke his former submissions, he never would have been allowed to address the bystanders for that purpose, and would thus have perished under the imputation of impenitent apostacy. But though he consented to transcribe the friar's document, there is no reason whatever to believe that he ever set his name to it; for the seventh paper attributed to him in Bonner's printed statement appears there, unlike the other six, without the signature of *Thomas Cranmer:* although the account affirms that it was written with his own hand. It may therefore be reasonably concluded, that he agreed to transcribe it purely for the purpose of ridding himself of the friar's solicitations, and of thus securing an opportunity of proclaiming his repentance before he died.

The facility afforded him for this public confession was, accidentally, beyond his hopes. Between nine and ten o'clock on the 21st of March, the Lord Williams, with others of the neighboring gentry, arrived in Oxford, for the purpose of presiding at the sacrifice of the reclaimed arch-heretic. The morning, however, happened to be so rainy, that instead of conducting him at once to the stake, they brought him to St. Mary's Church, in the full expectation that he would there complete the triumph of the Romanists, by proclaiming, with his dying breath, his adhesion to their communion. On his way thither he was placed between two friars, whose office it was to murmur out certain psalms, which it was conceived, were appropriate to his mournful situation. On his entrance into the church, the *Nunc Dimittis* was chanted; and the archbishop was then led forward to a scaffolding or platform, raised in front of the pulpit. When he had ascended it he knelt down to pray; and wept so bitterly, that many of the spectators were also moved to tears; more especially those among them "who had conceived an assured hope of his conversion and repentance."

Dr. Cole then commenced his sermon; in which he stated that Dr. Cranmer had been the prime agent in all the pernicious changes by which the realm had been for so many years distracted. He had usurped the office of pronouncing the divorce between Henry VIII and Queen Catherine; and though he might have been impelled rather by the suasions of other men, than by any malicious motive, yet he had thus become the chief author of all the confusion that had followed. He had, moreover, not only been the notorious patron of all the heresies which had burst into the kingdom, but had persisted in maintaining them, both by disputation and by writing: and so long a perseverance in error had never, but in time of schism, been pardoned by the church. The preacher also stated, that in addition to these causes of Cranmer's execution, the queen and her council were moved by certain other reasons, which it would not be fit or convenient to disclose.

Having next exhorted the bystanders to profit by the melancholy example before them, Dr. Cole addressed his discourse to Cranmer himself. He reminded the prisoner of the mercy of God, who will not suffer us to be tempted beyond what we are able to bear; expressed a good hope that he would, like the penitent thief, be that day with Christ in Paradise; encouraged him to meditate on the deliverance of the three children, to whom God made the flame seem like a pleasant dew; on the rejoicing of St. Andrew in his cross; and the patience of St. Laurence on the fire; and assured him that if in his extremity he should call on God, and on such as have died in his faith, he would either abate the fury of the flame, or else would give the sufferer strength to endure it. He gloried in the final conversion of Cranmer to the truth, which could only be regarded as the work of God: and concluded with many expressions of commendation, and with a promise that masses should be sung for his soul in every church in Oxford.

Having finished his sermon, the preacher desired that all who were present would offer up their supplications for the prisoner. On this Cranmer himself immediately knelt down in secret prayer. His example was followed by the rest of the congregation. They all of them prayed together, as by one consent. Those among them who once hated him as an incorrigible heretic, were now melted by the spectacle of his repentance; while others who had loved him before, were yet unable suddenly to hate him, and fondly clung to the hope that after all he would return to his former profession, and make a public acknowledgment of his fall. This general feeling of compassion had been powerfully heightened by the appearance of the archbishop during the sermon. He had stood before the people the very image of sorrow; his face bathed in tears, his eyes sometimes raised to heaven in hope, sometimes cast down to the earth in shame, but still preserving throughout a venerable aspect, and quiet solemnity of demeanor.

When his silent devotions were concluded, Cranmer rose from his knees, and turning towards the people, heartily thanked them for their prayers. He then said, "I will now pray for myself, as I could best devise for my own comfort, and say the prayer, word for word, as I have here written it;" and remaining still on his feet, he recited from his manuscript the following supplication:—

"O Father of Heaven; O Son of God, Redeemer of the world; O Holy Ghost, proceeding from them both, three persons and one God, have mercy upon me most wretched caitiff, and miserable sinner! I, who have offended both heaven and earth, and more grievously than any tongue can express, whither then may I go, or whither should I fly for succor? To heaven I may be ashamed to lift up mine eyes; and in earth I find no refuge. What shall I then do? Shall I despair? God forbid. O good God! Thou art merciful, and refusest none that come unto thee for succor. To thee therefore do I run. To thee do I humble myself: saying, O Lord God, my sins be great, but yet have mercy upon me for thy great mercy. O God the Son, thou wast not made man, this great mystery was not wrought, for few or small offences. Nor thou didst not give thy Son unto death, O God, the father, for our little and small sins only, but for all the greatest sins of the world; so that the sinner return unto thee with a penitent heart; as I do here at this present. Wherefore have mercy upon me, O Lord, whose property is always to have mercy. For although my sins be great, yet thy mercy is greater. I crave nothing, O Lord, for mine own merits, but for thy name's sake, that it may be glorified thereby; and for thy dear Son Jesus Christ's sake."

Having finished this act of devotion, he knelt down, and repeated the Lord's Prayer, all the congregation on their knees devoutly joining him. Then, rising on his feet once more, he addressed a solemn exhortation to the people, in which he warned them that *the love of this world is hatred against God;* enjoined them to remain in cheerful and willing obedience to the king and queen; besought them to live together like brethren and sisters; and, lastly, entreated the wealthy to lay up in their hearts the saying of our Lord, *It is hard for a rich man to enter into heaven;* and also the words of St. John,—"*Whoso hath this world's goods, and seeth his brother have need, and shutteth up his bowels of compassion from him, how dwelleth the love of God in him?*" He then continued his address to the people, in the following memorable words:—

"And now, forasmuch as I am come to the last end of my life, whereupon hangeth all my life past, and my life to come, either to live with my Saviour Christ in heaven, in joy, or else to be in pain ever with wicked devils in hell; and I see before mine eyes presently either heaven ready to receive me, or hell ready to swallow me up; I shall therefore declare unto you my very faith, how I believe, without color or dissimulation. For now is no time to dissemble, whatsoever I have written in times past.

"First, I believe in God the Father Almighty, Maker of heaven and earth, &c., and every article of the Catholic faith, every word and sentence taught by our Saviour Christ, his apostles, and prophets, in the Old and New Testament.

"And now I come to the great thing that troubleth my conscience more than any other thing that ever I said or did in my life: and that is, the setting abroad *of writings contrary to the truth. Which here now I renounce, and refuse, as things written with my hand contrary to the truth which I thought in my heart, and writ for fear of death, and to save my life, if it might be; and that is, all such bills, which I have written or signed with mine own hand, since my degredation; wherein I have written many*

things untrue. And forasmuch as my hand offended in writing contrary to my heart, therefore my hand shall first be punished. For if I may come to the fire, it shall be first burned. And as for the pope, I refuse him, as Christ's enemy and Antichrist, with all his false doctrine."

The amazement and confusion of the assembly at the utterance of this speech may very easily be imagined. All his judges, and doubtless a very large portion of the audience, expected nothing more from his lips but an open and penitent abjuration of his Protestant opinions. Instead of this, he proclaimed that he had nothing to repent of but his unworthy professions of the Romish faith. It was to no purpose that Lord Williams vehemently reminded him of this submission and dissembling, and exhorted him to remember himself and play the Christian man. The archbishop remained unshaken. "Alas! my lord," was his reply, "I have been a man that all my life loved plainness, and never dissembled till now against the truth, which I am most sorry for; and I cannot better play the Christian man than by speaking the truth, as I now do." He farther protested that, with regard to the doctrine of the Sacrament, he still believed precisely as he had written in his book against the Bishop of Winchester.

By this time the exasperation of the Romanists had become outrageous. The assembly broke up, and the archbishop was hurried to the place of execution. On his way thither, one of the friars, foaming with rage and disappointment, assailed him with reproaches for his inconstancy, and bade him remember his recantation; repeatedly crying out, "Was it not thy own doing?"† On his arrival at the stake, he put off his garments with alacrity, and even with haste, and stood upright in his shirt. When his caps were taken off, his head appeared so bare, that not a single hair could be discerned upon it. His beard, however, was long and thick, and his countenance altogether of such reverend gravity, that neither friend nor foe could look upon it without emotion. While the preparations for his death were completing, a bachelor of divinity, accompanied by two Spanish friars, made one desperate effort to recall him to his apostacy. But their attempts were utterly fruitless. The archbishop was only moved to repeat that he sorely repented of his recantation, because he knew it was contrary to the truth. On this the friars said, in Latin, to each other,—"Let us leave him to himself; the devil is surely with him, and we ought no longer to be near him." Lord Williams became impatient of further delay, and ordered the proceedings to be *cut short*. Cranmer, therefore, took his surrounding friends by the hand, and bade them his last farewell: while his defeated monitor, the bachelor, indignantly rebuked them for touching the heretic, and protested that he was bitterly sorry for having come into his company. He could not forbear, however, once more, to urge his adherence to his recantation. The answer of Cranmer was—"This is the hand that wrote it, and therefore it shall suffer punishment."

The fire was, now, speedily kindled; and Cranmer immediately made good his words, by thrusting his right hand into the flame. He held it there with unflinching steadiness, exclaiming from time to time—"This hand hath offended,—this unworthy hand!" So immoveable was his fortitude, that the spectators could plainly perceive the fire consuming his hand, before it had materially injured any other part of his frame. At last, the pile became completely lighted, and then the fire soon did its work upon him. To the very last, his resolution continued firm. When the flames mounted, so that he was almost enveloped by them, he appeared to move no more than the stake to which he was bound. His eyes, all the while, were steadfastly raised towards heavens; and, so long as the power of utterance remained, his swollen tongue was repeatedly heard to exclaim, 'This unworthy hand!—Lord Jesus, receive my spirit.'

That Cranmer's "patience in the torment, and courage in dying" were worthy of the noblest cause, is amply and generously attested by the Roman Catholic spectator who has left us an account of his last sufferings. "If," says the writer of that narrative, "it had been either for the glory of God, the weal of his country, or the testimony of the truth,—as it was for a pernicious error, and subversion of true religion.—I could worthily have commended the example, and matched it with the fame of any father of ancient time." There is a sort of traditional story that, after he was burned, his heart was found unconsumed in the midst of the ashes. The tale is scarcely worth repeating. It is, indeed, just possible, that when the flames had nearly consumed the parts more immediately exposed to their action, the heart may have been separated from the body; and may have accidentally fallen upon a spot where the fire was less fierce: and there it may have been found comparatively uninjured, or, at least, in a state which might enable a spectator to distinguish it. And this may have given birth to a report, which credulity or superstition might exalt into a miracle.

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* This exhortation was rendered very appropriate, by the severe scarcity then prevalent at Oxford.

† *Nonne fecisti.* Foxe.

Thus perished Archbishop Cranmer;—a man, to whom the obligations of this country must ever be "broad and deep:" for to his conscientious labors, and incomparable prudence and moderation, we are, under Providence, mainly indebted for the present fabric of our Protestant church. The brightness of his last hour was preceded, it is true, by an awful interval of darkness. The shadows, however, most happily passed away from him; and his name resumed its lustre in the midst of the fires of his martyrdom.

MEMOIRS OF THE COURT OF KING CHARLES THE I., by LUCY AIKEN, 2 vol. 8vo. *Philadelphia*, CAREY, LEA & BLANCHARD.—Historical memoirs, combining as these do, the graver facts of history, with less noticed but often not less influential personal incidents—which at one moment exhibit before us on the stage, in all the illusions of a brilliant reality, the march of great men and great events, and then taking us behind the scenes show us these same men and the agents in these great works, in their natural dimensions and colors,—Memoirs such as these are always found most attractive as well as instructive. The former works from the same pen, on the Court of James, and of that on Elizabeth, dispense us, by the success they met with, from enlarging on the qualifications which Miss Aiken brings to the task. We content ourselves, therefore, with an extract, which may serve to show how well she narrates: it is that which presents the closing days of the trial and execution of Charles. (It will be found at page 750, of this Journal.) We have taken this, both on account of the interest attached to the event itself, as for the sake of affording means of comparison between the record of this political martyrdom—as all good royalists call the death of Charles—and the religious martyrdom of Cranmer, of which an account from another source is inserted above:

THE GEOGRAPHICAL ANNUAL, FOR 1834. Philadelphir, CAREY, LEA & BLANCHARD.—The beautiful, and useful as beautiful cabinet atlas, which these publishers gave us last year, they have this year republished, with increased luxury of execution, as an Annual; and, inasmuch as it vies in externals with the other Annuals, and has abundant well colored maps to supply the place of a few engravings, we deem it by far the best of these publications, and one, moreover, that does not lose its value.

THE LADIES' AND GENTLEMEN'S POCKET ANNUAL, FOR 1834: Edited by EDWIN WILLIAMS, author of the New York Annual Register. *New York:* J. DISTURNELL.—An almanac, a register of public functionaries in the general and state governments, of the army and navy, with blank pages for memorandums, (more than will be improved we fear,) and some selections in prose and verse, make up this Pocket Book, which we commend as both ornamental and convenient.

THE JUVENILE REPOSITORY; vol. 1. *Boston:* B. G. GREENE and LEO. C. BOWLES, New York H. N. Kimball 110 Fulton street. This little collection prepared by a lady, is made up of stories, anecdotes, and information written in a style suited to the capacity and intelligence of children, and calculated to improve their habits and understanding. There are wood cuts which add always to the attraction of children's books.

We have several other works on hand which we are prevented from noticing this week, but they shall not be passed over.

No. IV.

Bedford, Pa. Oct. 24th, 1833.

We have commenced ascending the Alleghanies. A cold, difficult ride among the hills, has brought us at last to an excellent tavern in the little town, from which I write. A blazing fire of seasoned oak in a large franklin, sputters and crackles before me; and, after having warmed my fingers, and spent some twenty minutes in examining an extensive collection of Indian arms and equipments, arranged around the room with a degree of taste, that would not have disgraced the study of Sir Walter Scott, I sit down quietly to give you my first impressions of this mountain region.

We entered these highlands yesterday. It was about an hour before sunset that we commenced ascending a mountain ridge, whose deep blue outline, visible for many a long mile before we reached the base, might be mistaken in the distance for the loftier rampart of which it is only the outpost. The elevation, which showed afar off like a straight line along the horizon, became broken in appearance as the eye at a nearer view measured its ragged eminences, but it was not till we were winding up a broad hollow scooped out of the hill-side, and through which the beams of the declining sun played upon the fields and farm-houses beyond, that the true character of the adjacent region opened upon us. The ridge we were ascending, still rose like a huge wall before us, but the peaks, which had seemed to lean against the clear October sky like loftier summits of the same elevation, now stood apart from the frowning barrier, towering up each from its own base—the bastions of the vast rampart we were scaling. Each step of our ascent seemed now to bring out some new beauty, as, at the successive turns of the road, the view eastward was widened or contracted by the wooded glen up which it led. But all of these charming glimpses, though any of them would have made a fine cabinet picture, were forgotten in the varied prospect that opened upon us at the summit of the ridge. Behind, toward the east, evening seemed almost to have closed in upon the hamlet from which we had commenced our ascent, at the base of the mountain, but beyond its deepening shadow, the warm sunset smiled over a thousand orchards and cultivated fields, dotted with farm-houses, and relieved by patches of woodland, whose gorgeous autumnal tints made them show like the flower-beds of one broad garden. Southwardly, the bold upland which here heaved at once from the arable grounds beneath us, while it swelled higher, rose less suddenly from the plain. At one point the brown fields seemed to be climbing its slopes, while here and there a smooth meadow ran like the frith of a sea within its yawning glens, and now again peak after peak of this part of the range could be traced for leagues away, till the last blue summit melted into the sky, and was finally lost in the mellow distance. Such, while our horses' heads were turned to the northwest, was the rich and varied view behind us—the prospect from the Catskills is the only one I can recollect that rivals it in magnificence. But another scene more striking, though not so imposing, was also at hand,—a ridge like that we had just crossed rose before us; but beneath our very feet, and apparently so near that it seemed as if one might drop a stone into its bosom, lay one of the loveliest little vallies into which the sun ever shone. It was not a mile in width, beautifully cultivated, and with one small village reposing in its very centre,—the southern extremity seemed to wind among the lofty hills I have already attempted to describe, but its confines toward the north were at once determined by a cluster of highlands, whose unequal summits waved boldly forth in the purple light of evening. The sun, which had now withdrawn his beams from the scene behind us, still lingered near this lovely spot, and his last glances, before they reached the hill-side we were descending, flashed upon the windows of the village church, and creeping unwillingly up its spire, touched with glory the gilded vane; then from the sweeping cone of a pine above us, smiling wistfully back on the landscape he was leaving, yielded at last to coming night.

The descent of the mountain, from its multiplied windings, consumed more time than I had anticipated. The faint rays of a young moon were just beginning to compete successfully with the fading tints of day, before we had neared the village sufficiently to hear the lowing of cattle, and the shrill shout of the cow-boy, driving his charge homeward; and her maturer beams were softened by the thin haze which rose imperceptibly from a brook winding through the valley, before we reached our destination for the night. The occasional jingling of a wagoner's bells in the distance, and the merriment of a group of children playing by the moonlight in a grassy lot near the stream, were the only sounds which broke the stillness of the scene as we drove up to the door. I thought of the happy valley of Rasselas, and wondered whether the inhabitants of this secluded spot could really ever wish to wander beyond its beautiful precincts.

The gradual, successive, and delicious blending of lights, as I have attempted to describe them, under which I first beheld the little valley of M'Connelsville, will doubtless account for much of my admiration of it; and indeed some of its features were changed, and not for the better, when viewed under a different aspect the next morning. A sharp north-easter, in spite of the barriers which had seemed to shelter it, drove down the valley; a cold drizzling rain, with its attendant mist, shut from view the mountain tops around; and the village dwellings, lining one long narrow street, and now no longer gilded with the hues of sunset, nor standing clearly out in the silver light of the moon, showed like the

miserable hovels they were; the snug stone house where I had passed the night seemed to be almost the only tolerable building in the village, and I was not sorry to pass its last straggling enclosure, and commence ascending the arduous height beyond. The summit of this attained, another valley, about double the width of that just passed, lay before us; and as the rain subsided at noon, leaving a gloomy lowering day, we could discover through the cold gray atmosphere ridge succeeding to ridge leaning like successive layers against the western sky.

A half a day's rough ride among these wild ravines brought us at last to the banks of the Juniata, along which an excellent road is cut for some distance. The stream, though in the midst of scenery of the boldest description, keeps its way so calmly between its rocky banks, that the dead leaf upon its bosom floats for nearly a mile, before a ripple curls over its crisped sides, and sinks the little shallop to the bottom. We dined near nightfall at a small hamlet known, from a brook that runs through it, as "The Bloody Run." The stream which bears this startling name is a rill so small, that its existence is barely perceptible, as it creeps through the pebbles across the road, and hastens to hide its slender current in the long grass of an orchard beyond; but its waters will be pointed out by the villagers with interest, so long as they dampen the channel where they once flowed in all the pride and fulness of a mountain torrent.

It was several years before the revolution, according to the statement given to me by one of those distinguished persons who in country towns always figure after a snow-storm or freshet, as the 'oldest inhabitant of the place,' that a large party of colonists, on their march toward Fort Du Quesne, were here cut off by the Indians. The ambushed foe had allowed the main body to pass the brook, and surmount the heights beyond; and the rear-guard, with the cattle they had in leading for the use of the troops, were drinking from the stream, when the onslaught was made. The Indians rushed from their covert, and burst upon their victims so suddenly, that fifty whites were massacred almost before resistance was attempted. Those who were standing were dropped like deer at gaze by the forest marksmen; and those who were stooping over the stream, before they even heard the charging yell of their assailants, received the blow from the tomahawk which mingled their life's blood with the current from which they were drinking.

The retribution of the whites is said to have been furious and terrible.; the body of men in advance returned upon their tracks, encamped upon the spot, und after duly fortifying themselves, divided into parties, and scoured the forest for leagues. My informant, who gave me only the traditioin ary account of the village, could not tell how long this wild chase lasted; but that it must have been fearfully successful, is proved not only by the oral record of the place, but by the bones, and Indian weapons, which are at this day continually found amid piles of stone in the adjacent woods; the Indians probably returning to the valley after the storm had passed over, and heaping their customary *cairn* over the bodies of their dead kindred.

What a contrast was the peaceful scene I now beheld, to that which the place witnessed some seventy years ago; a train of huge Pennsylvania wagons were standing variously drawn up, upon the very spot where the conflict was deadliest; the smoking teams of some were just being unharnessed, a few jaded beasts stood lazily drinking from the shallow stream that gurgled around their fetlocks, while others, more animated at the near prospect of food and rest, jingled the bells appended to the collars in unison with their iron traces which clanked over the stones, as they stalked off to the stable. To those signs of quiet, and security, were added those true village appearances which struck me so pleasingly on my approach to McConnelsville. A buxom country-girl or two could be seen moving through the enclosures bearing the milk-pail to meet the cows which were coming in lowing along the highway, while the shouts and laughter of a troop of boys just let loose from school, came merrily on the ear as they frolicked on a little green, hard by. My companion stood in the midst of them, holding a piece of silver in his fingers, while a dozen little chaps around him were trying who could win the bright guerdon by standing on one leg the longest; the ridiculous postures of the little crew, with the not less ludicrous gravity of my friend, who was thus amusing himself, of course, put an end to my sober musings; but I could not help, while advancing to the scene of the sport, fancying for a moment the effect of the war-whoop breaking suddenly, as ere now it often has, upon a scene apparently so safe, sheltered, and happy.—Good night.

SOMERSET, Oct. 26th.

You have read in the newspaper, of the recent destruction of this place by fire; it must have been large and flourishing, judging by the extensive ruins which I have just been trying to trace by the frosty light of the moon now shining over them. The appearances of desolation here are really melancholy, the tavern where we put up is the only one left standing out of five or six, and it is so crowded with the houseless inhabitants that I find it difficult to get a place to write in. I was not a little amused, while sitting an hour perforce in the bar room, to hear half a dozen fellows, who had lost their all, making themselves merry with a thriving tailor, who, saving every thing but a pair of spectacles, and his *goose*, makes more ado about his losses than any of the sufferers. A large collection for their relief has been made among the charitable of the neighbouring villages, and Tape, it is said, insists upon appearing before the financial committee to receive a consideration for his ruined spectacles and his timelessly wasted goose.

We are now in the bosom of the Alleghanies,—thescenery passed to day is beautiful, most beautiful. The mountains are loftier, as well as more imposing in form, than those which skirt these wild regions eastwardly; whichever way the eye directs itself, they are piled upon each other in masses which blend at last with the clouds above them. At one point they lie in confused heaps together; at another, they lap each other with outlines as distinct as if the crest of each were of chiselled stone,—some, while the breeze quivers through their dense forests, rear their round live backs like the hump of a camel boldly near, and some swelling more gradually from the vales below, show in the blue distance like waves caught on the curl by some mighty hand, and arrested ere they broke on the misty region beyond. Then for their foliage! the glorious hues of autumn are here displayed in all their fulness, and brilliancy, and power—volume upon volume, like the rolling masses of sunset clouds, the leafy summits fold against the sky—calm at one moment as the bow of peace whose tints they borrow, and at another flaming, like the banners of a thousand battles in the breeze.

But why should I attempt to describe what baffles all description. The humblest grove of our country is, at this season, arrayed in colours such as the Italian masters never dreamed of; and woods like these assume a pomp which awes the pencil into weakness. Such forests, such foliage were unknown when our language was invented. Let those who named the noble-sounding rivers that reflect their glories, supply words to describe them.

Farewell. I shall write to you next from Wheeling, Virginia, and if you do not think me tedious, will touch again upon the beauties of the region through which I am now passing.

H.

SUMMARY.

APPOINTMENT BY THE PRESIDENT.—Richard Pollard, of Virginia, to be Consul of the United States in the city of Mexico, in the place of James S. Wilson, resigned.

Benjamin Franklin Butler, of New York, to be Attorney General of the United States, in the place of Roger B. Taney.—[Globe.]

We are confident that, at no distant day, the Southern manufactories will far outstrip those caried on to the North,—for the simple reason, that *slave labor* can be successfully and most profitably employed.—The time was when such an opinion would have found no favorers. Now, we believe, it is getting to be universally admitted. We think we see clearly the dawning of a new era in the prospect of the South, from this fact alone. We have recently seen statistical statements, which satisfy us that when the Cotton Factories now talked of are put into operation, in the Southern country, we shall find slave labor more valuable and usefnl than it has yet been to the people in our section of country.—[Alexandria Phœnix.]

The annexed article, from the Buffalo Journal, on the meteoric phenomena of the 13th, differs in two important particulars from all other accounts we have seen, of that occurrence—1st, in describing the luminous bodies as shooting *upwards* as well as in all other directions; and 2d, in stating that the Aurora borealis was visible, during the whole time.

The absence of the Aurora was particularly remarked here, as, by a communicstion now before us, we see it was at Keene, N.H., and so in all the other accounts we have seen.

[*From the Buffalo Journal.*]

Very interesting atmospherical phenomena were visible, a little before daylight this morning, in this city. My attention was first called to them about half past four, A. M. The wind, which had been very heavy for many hours, had abated considerably, every vestige of clouds had disappeared, and the stars were shining through an unusually clear atmosphere. The air from within twenty feet of the earth to, apparently the ordinary height of the clouds, (half a mile,) was filled with phosphoric particles, which were continually and successively becoming luminous. They all passed, while visible, with great velocity through the air, but in no uniform direction—some rose, some fell, others moved horizontally, and others again, at every conceivable angle, to these several courses. Their color was a vivid white, resembling that of the flame of steel wire burning in oxygen. Their sizes were various, but mostly about the apparent size of stars of the second magnitude. The distance of their luminous flights were various and not easily calculated. Many of them in their passage, left a luminous line in the air, of their own color, which was often several yards in length, and usually remained visible from one to three seconds. I have said there was no cloud; there was none, but the whole atmosphere was constantly, at very short intervals, illuminated by flashes of light, in no way differing from ordinary silent electrical explosions The *Aurora Borealis* during the whole time of my observations, which was about half an hour, was distinctly visible, though by no means so brilliant, or so active as that meteor usually is, when visible here.

Upon the whole, the scene was by far the most sublime meteoric display I ever beheld; and I only regret that the unfavorable hour of its occurrence deprived me of an opportunity of observing the influence that such a singular electrical state of the atmosphere may be supposed to have exerted upon the magnetic needle. H.

Buffalo, Wednesday, Nov. 13, 1833.

[*From the New Haven Herald.*]

THE METEORS.—About day-break this morning, our sky presented a remarkable exhibition of Fire-Balls, commonly called *Shooting Stars*. The attention of the writer was first called to the phenomenon about half past five o'clock, from which time until near sunrise, the appearance of these meteors was striking and splendid, beyond any thing of the kind he has ever witnessed or heard of.

To form some idea of the phenomenon, the reader may imagine a constant succession of fire-balls, resembling sky rockets, radiating in all directions from a point in the heavens near the zenith, and following the arch of the sky towards the horizon.—They proceeded to various distances from the radiating point, leaving after them a vivid streak of light, and usually exploding before they disappeared. The balls were of various sizes, and degrees of splendor: some were mere points, but others were larger and brighter than Jupiter or Venus; and one, seen by a credible witness, before the writer was called, was judged to be nearly as large as the moon. The flashes of light, though less intense than lightning, were so bright as to awaken people in their beds. One ball that shot off in the northwest direction, and exploded near the star Capella, left, just behind the place of explosion, a phosphorescent train, of peculiar beauty. This line was at first nearly straight, but it shortly began to contract in length, and dilate in breadth, and assume the figure of a serpent folding itself up, until it appeared like a small luminous cloud of vapor. This cloud was borne eastward by the wind, opposite to the direction in which the meteor had proceeded, remaining in sight several minutes. The light was usually white, but was occasionally prismatic, with a predominance of blue.

A little before six o'clock, it appeared to the company, that the point of radiation was moving eastward from the zenith, when it occurred to the writer to mark its place, accurately, among the fixed stars. The point was then seen to be in the constellation Leo, within the bend of the *sickle*, a little to the westward of Gamma Leonis, and not far from Regulus. During the hour following, the radiant point remained stationary in the same part of Leo, although the constellation in the mean time, by the diurnal revolution, moved westward to the meridian 15 degrees. By referring to a Celestial Globe, it will be seen, that this point has a right ascension of 150 degrees, and a declination of about 20 degrees. Consequently it was 20 degrees 18 minutes south of our zenith.

The weather had sustained a recent change. On the evening of the 11th, a very copious southerly rain fell, and on the 12th, a high westerly wind prevailed, by gusts. Last evening the sky was very serene; a few falling stars were observed, but no so numerous as to excite particular attention.

The writings of Humboldt contain a description of a singular phenomena observed by Bonpland, at Cumana. It is worthy of remark that this phenomenon was seen nearly at the same hour of the morning, and on the 12th of November.

As the cause of "Falling Stars" is not well understood by meteorologists, it is desirable to collect all the facts attending this phenomenon, stated with as much precision as possible. The subscriber, therefore, requests to be informed of any particulars which were observed by others, respecting the *time* when it was first discovered, the position of the *radiant point* above mentioned, whether progressive or stationary and of any other facts relating to the meteors. DENISON OLMSTED.

Yale College, Nov. 12, 1833.

The rain of stars which has excited so much speculation, and, in some quarters, consternation here, extended to Boston on the East and Richmond on the

South of us. The Philadelphia Gazette of Saturday gives us the following account of a similar phenomenon in the year 1799:

An antiquarian friend furnished us yesterday with an extract from the Newburyport Herald, of December, 1799, in which allusion is made to a display of shooting stars, precisely similar to that witnessed a few days since. What is certainly remarkable in this statement, is, that the phenomenon was observed about *the same day of the month*—the 12th of November—just thirty-four years ago. We subjoin the extract from the Herald:

"*Remarkable Phenomena, seen by Capt. Woodman and crew of the brig Nymph.*—On my late passage home from the Island of St. Domingo, being in lat. 29, long. 71, on the 12th of November, 1799, at half past one o'clock in the morning, the weather being very clear and pleasan', the wind to the eastward, the moon near the full, and shining very bright, observed the stars to shoot in great numbers from every part of the compass, and at two o'clock the whole atmosphere appeared to be full of stars; I may say thousands of thousands, shooting and blazing in every direction, in a most extraordinary and alarming manner, and so continued till day light. The day following, the wind came round with the sun, till it got to the northward, and the whole atmosphere was filled with smoke, attended with a strong smell like the burning of wood, and so continued for several days, until I got lat. 35 N. And further, on my arrival at the Vineyard, I met with there several masters of vessels, who were on their passage at the same time, and said that the stars made the same appearance to them on the night above mentioned, though they were then several degrees to the northward of me."

The phenomenon alluded to above, is spoken of in Barritt's Astronomy, as having been seen by Mr. Andrew Ellicott, who was sent out by our Government to fix the boundary between the Spanish possessions in North America and the United States. "I was called up," says Mr. Ellicott, "about three o'clock in the morning to see the shooting stars as it is called. The whole Heavens appeared as if illuminated with sky rockets, which disappeared only by the light of the sun after day break. The Meteors, which at any one instant of time appeared as numerous as the stars, flew in all possible directions except *from* the earth, *towards* which they were all inclined more or less, and some of them descended perpendicularly over the vessel we were in, so that I was in constant expectation of their falling on us."

Humboldt also witnessed the phenomena, at Cumana, South America, at the same time. His description of it is as follows:—

"Towards morning of the 12th November, 1799, a very extraordinary display of luminous meteors was observed in the east by M. Bonpland, who had risen to enjoy the freshness of the air in the gallery. Thousands of fire balls and falling stars succeeded each other during four hours, having a direction from north to south; and filling a space of the sky extending from the true east 30 degrees on either side.—They rose above the horizon at E. N. E. and at E. described arcs of various sizes, and fell towards S. some attaining a height of 40°; and all exceeding 25° or 30°. No trace of clouds was to be seen, and a very slight easterly wind blew in the lower regions of the atmosphere. All the meteors left luminous traces from five to ten degrees in length, the phosphorescence of which lasted seven or eight seconds. The fireballs seemed to explode, but the largest disappeared without scintillation; and many of the falling stars had a very distant nucleus, as large as the disk of Jupiter, from which sparks were emitted. The light occasioned by them was white,—an effect which must be attributed to the absence of vapors; stars of the first magnitude having within the tropics, a much paler hue at their rising than in Europe,

As the inhabitants of Cumana leave their houses before four, to attend the first morning mass, most of them were witnesses of this phenomenon, which gradually ceased soon after, although some were still perceived a quarter of an hour before sunrise.

The day of the 12th November was exceedingly hot, and in the evening the reddish vapour reappeared in the horizon, and rose to the height of 14°. This was the last time it was seen that year.

The researches of M. Chladni having directed the attention of the scientific world to fireballs and falling stars at the period of Humboldt's departure from home, he did not fail to inquire during his journey from Caraccas to the Rio Negro, whether the meteors of the 12th November had been seen. He found that it had been observed by various individuals in places very remote from each other; and on returning to Europe was astonished to find that they had been seen there also.

It is now about three years and a half since the travelling on the Baltimore and Ohio Rail Road was commenced, and more than three hundred thousand passengers have since travelled on it without, it is said, a single instance of serious injury, to life or limb, having occurred to any one of them.

Veto Miseries.—The navigation is so badly obstructed that neither Steamboats nor other Vessels can pass the Overslaugh. The Steamboats Erie, De Witt Clinton, Constitution, and Sandusky, with several Tow-Boats, and a fleet of Schooners and Sloops are now aground. The consequence is, that an immense amount of property is embargoed just as the cold weather threatens to close the Canals! * * * * As Congress is about to meet, this question should be urged upon its immediate attention. The navigation of the Hudson River must be improved, or Albany becomes a deserted city.—[Alb. Eve. Jour. of Wednesday.]

Railroad Accident.—A slight fall of snow, early on Tuesday morning made the tracks of the Rail. road in State st. so slippery, that the brake was entirely useless, in holding back the first car, which came over the road, down the hill towards the car-house. The door being shut, one of the horses attached to the leading car, wrs seriously crushed, and subsequently died. Some sand sprinkled on the ice, which covered the rails, obviated the difficulty.—[Albany Daily Advertiser.]

The Cincinnati Advertiser gives the following particulars of the loss of the steamboat *New Brunswick*, on her passage from New Orleans to St. Louis:—

She took fire among some chairs on deck, that were matted, while the passengers were at dinner, which had burnt into the ladies' cabin before it was discovered. The boat was immediately run on shore, from the apprehension she would blow up, the alarm of powder being on board having been spread among the passengers; the passengers and crew had scarcely got on shore, when she blew up, and is a total loss, vessel and cargo, with passengers' baggage. No lives lost.

A numerous body of Operative Mechanics met last Monday at the North American Coffee House for the purpose of petitioning the Legislature to abolish the practice of employing convicts in the various branches of manufacturing, and mechanics; several resolutions were passed unanimously, and a Committee of twenty-five appointed with power to add to their number to take such measures as they shall deem most expedient to further the wishes of the meeting.

New Quarterly Review.—We have before us the Prospectus of the *United States Quarterly Review*, to be published in Philadelphia, by A. Waldie, under the charge, as editor, of Prof. *Vethake*, late of the University in this city.

The land is full of portents which we take not upon us to read or interpret. In addition to the accounts of hurricanes and falling stars heretofore published, we have in the annexed extract of a letter from the vicinity of Hudson in this State, the notice of another very unusual occurrence:

"Woodburn, near Hudson, Nov. 15.

"A singular occurrence took place on my farm some days ago, which has excited a good deal of speculation among all who have since visited the spot. A beautiful and well grown little wood which you remember on the left of the road as you approach the house, containing about an acre and a half, suddenly sunk down about thirty feet, most part of it perpendicularly; so that where not long since the roots of the trees were to all appearance firmly imbedded, the topmost branches now peep out. The wood is bounded by the creek, of which the sides and bottom are blue clay. The land near the bank, from some unexplained cause, seems to have given way all at once, and slid into the creek; which, by the mass thrown into it, is so filled up, that from its previous width of fifty feet, with an occasional depth of twenty, it is reduced to a little rill, which one might easily jump across. A strip of land adjoining the road of about thirty feet wide and of considerable length, has sunk straight down, so that where the surface was before level, there is now a perpendicular bank of thirty feet. The spectacle altogether is most curious, but, as you may imagine, presents no great improvement to the appearance of my farm."

Mobile, Nov. 4.—*Important.*—We are indebted to the Marshal of this District for the following extract of a letter of instructions to the Secretary of War, under date of the 19th of Oct. We hasten to lay it before our readers:—

"A commission has been instituted which will proceed immediately to the location of the Creek lands. They have been directed to lose no time in the performance of this service, in order that the Indians may be removed upon their own reservations, and the necessity of your action in the affair, obviated at as early a day as possible.

"They will probably commence their labors at Fort Mitchell by the 1st of November."

Great Fall, New Hampshire, 16th Nov.—*Hurricane.*—On Saturday night last, about 11 o'clock, we were visited by a hurricane from the north west, which lasted about thirty minutes, and for the time was uncommonly severe and threatening. Many houses rocked and shook to an alarming degree, and we learn that several chimnies were blown down in Dover; in one case the bricks broke through the roof and some of them fell on a bed on which a person lodged, who fortunately escaped unhurt. We also learn that considerable damage was done to fences, &c. in the vicinity lying in the range of the storm. The Boston papers speak of it as being violent in that quarter. Some damage was sustained in Cambridgeport and other places adjacent, and had it coutinued any considerable time, would have terminated in an extensive and serious catastrophe. The N. W. corner of Rev. Mr. Gannet's meetinghouse was blown entirely clear of the building, and the joists and rafters carried by the hurricane 300 feet distant.

Important from Mexico.—A passenger in the brig Spark, communicates to us the subjoined intelligence:—

An estafette that left Mexico on the 10th ult. arrived at Vera Cruz on the 12th, and brought official information of the total defeat of the insurgents. The principal points of Guanajuato were taken by the government troops, and the commandant of the station offered to capitulate, in order to save the horrors of an assault. The Vera Cruz Journal of the 12th, contains his correspondence with Santa Anna upon the subject.

The traitor Escalado has been unanimously condemned to death, and was to have been hung on the 12th, in the capital.

Mr. Tadeo Ortiz, former Mexican consul at Bordeaux, died of cholera on board the Spark, during the voyage. He had obtained a concession from his government authorizing the colonizing of strangers upon the banks of the Rio Brassos.—[New Orleans Bee.]

From St. Vincents.—By the Br. brig Jabez the Editors of the New York Daily Advertiser have received files of papers to the 24th Oct. They are filled with the proceedings in the House of Assembly on the subject of the act for abolishing slavery. A solemn Protest against the British act of Parliament had been brought in and adopted; in which they state that the course pursued by the mother country is most fatal to the interests of the Planters, and ruinous to the Island; that the compensation to be allowed is not one tenth the value of the property, &c., and reserve the right of demanding a further compensation. The Council refused to act on the Protest. The Assembly, in transmitting the Protest to the Lieut. Governor, says:—

"We assure your Excellency that, notwithstanding this precautionary mode of proceeding, there is a determination on the part of the Assembly to give their best support to such plans as may, from time to time, be proposed by the supreme Government at home to carry into effect the abolition of slavery in this Colony, and to lay the foundation of future industry and prosperity; without, however, incurring, in the remotest degree, any portion of the great and fearful responsibility of a measure, which will introduce such hazardous changes into the various relations of society.

"I have the honor to be, your Excellency's most obedient, and humble servant.

(Signed) J. P. Ross, *Speaker.*

His Excellency the Lieutenant Governor."

The Proclamation of the King is published, wherein all slaves are to be apprenticed to their masters on the 1st August, 1834, and on the 1st August, 1840, they are to be for ever free. As might be expected, this Proclamation caused the greatest excitement. The Journals, however, admit that they have no power to resist; that they are weak and feeble; and that they have no other course left but to submit, and carry their complaints to the foot of the throne.

[*From "Memoirs of the Court of King Charles I."*]

On the 27th the trial was resumed, when, the court being called, sixty-eight members besides the president answered to their names. "As the king comes in, a cry made in the hall for execution, justice, execution." The king pressing repeatedly to be heard, was told that he must first hear the court; and the president, in a prepared speech, set forth the conduct of the king in contumaciously refusing to answer his charge and denying the jurisdiction of the court, and when overruled in that, still "refusing to submit or answer;" wherefore the court, that they might not be wanting in the trust reposed in them, "nor that any man's wilfullness prevent justice," had taken into consideration the contumacy, and "the confession that in law doth arise upon that contumacy;" also the notoriety of the facts charged upon the prisoner, —and on the whole had considered and agreed upon a sentence. But, as he desired to be first heard, the court did consent to hear him, warning him before of "that he had been minded of at other courts," that he would not be heard against their jurisdiction. "You have offered it," added the president, "formerly, and you have indeed struck at the root, that is, the power and the supreme authority of the commons of England, which this court will not admit a debate of, and which indeed is an irrational thing for them to do, being a court that acts upon authority derived from them, that they should presume to judge upon their superior, from whom there is no appeal." If the king had any thing to say in defence of himself, in respect of the matter charged, it was announced that the court would hear him.

Charles said, in answer, that if he had not thought more of the peace of the kingdom and of the liberty of the subject than his own life, he should have made a defence, by which he might at least have delayed "an ugly sentence," now, he believed, ready to pass upon him; that now, as "a hasty sentence once passed may sooner be repented than recalled," he desired that before the sentence, he might be heard in the Painted Chamber before the two houses of Parliament. The delay could not hurt, and "therefore," he said, "I do conjure you, as you love that you pretend, I hope it is real, the liberty of the subject and the peace of the kingdom," to take it into consideration. The president answered, that this was in effect but a further declining of the jurisdiction of the court, which he had been limited in before. This the king endeavored to deny. "Sir,' said the president, "you say you do not decline the jurisdiction of the court?" "Not," warily replied the king, "in this that I have said."

The president rejoined, that it was in fact a motion both for delay and a coordinate jurisdiction, which this court, now prepared to give sentence, was not obliged to grant; yet the commissioners would retire for half an hour and consider of it.

It was, however, a request which evidently could not safely be conceded by a court erected by an ordinance of the house of commons not only without the concurrence, but in defiance of the dissent of, the house of lords; and on the return of the commissioners, the prisoner was informed that his proposition was inadmissible; that he had too long delayed the court by his contempt and default, and they were unanimously resolved to proceed "to punishment and to judgment."

The king persisted for some time in reiterating his proposition, but was at length put to silence. The president then addressed him in a speech designed to prove to him his own guilt, and the rightfulness and justice of the sentence. He told the king that it plainly appeared he had held very erroneous principles; "for, sir, you have been nowise subject to the law, or that the law had not been your superior. Sir, the court is very well sensible of it, and I hope so are all the understanding people of England, that the law is your superior, that you ought to have ruled according to the law. . . . I know very well that your pretence hath been that you have done so; but, sir, the difference hath been, who shall be the expositors of this law; whether you and your party out of the courts of justice shall take upon them to expound the law, or the courts of justice, who are the expounders;—nay, the sovereign and high court of justice, the parliament of England, that are not only the highest expounders, but the sole makers of the law. Sir, for you to set your single judgment and those that adhere unto you, against the high courts of justice, that is not law. As the law is your superior, so truly, sir, there is something superior to the law, and that is, the people of England. For as they are those that at the first did choose to themselves this form of government, even for justice' sake, that justice might be administered, that peace might be preserved; so, sir, they gave the laws to their governors according to which they should govern; and if these laws should have proved inconvenient, or prejudicial to the public, they had a power in them, and reserved to themselves to alter them as they shall see cause. . . . . The end of having kings or any other form of government, is for the enjoyment of justice. Now, sir, if so be that the king will go contrary to the end of his government, he must understand that he is but an officer in trust, and he ought to discharge that trust, and they are to take order for the animadversion and punishment of such an offending governor. This is not law of yesterday, sir, since the time of the division betwixt you and your people, but it is law of old. And we know very well the authorities that do tell us what the law was in that point upon the election of kings, upon the oath that they took unto their people. And if they did not observe it, there were those things called parliaments; the parliaments were they that were to adjudge (the very words of the authority,) the plaints and wrong done of the king and queen, or their children; such wrongs especially when the people could have nowhere else any remedy. That hath been the people's of England's case; they could not have their remedy any where but in parliament.

"Sir, I speak these things the rather to you, because you were pleased to let fall the other day, that you thought you had as much law as most gentlemen in England. It is very well, sir, and truly it is very fit for the gentlemen of England to understand that law under which they must be governed. And then the Scripture says, 'They that know their master's will and do it not'—What follows? The law is your master, and the acts of parliament." After some remarks on the dignity and antiquity of parliaments, and reproaches against the king on account of his plots for "crushing and confounding" that great bulwark of the people's liberties, which God had been pleased to contound, and to bring him into custody, "that he might be responsible to justice," the president adverted to another topic. "Sir, we know very well, that it is a question much on your side pressed, by what precedent we shall proceed. Truly, sir, for precedents, I shall not upon this occasion institute any long discourse; but it is no new thing to cite precedents of almost all nations where the people, when power hath been in their hands, have made bold to call their kings to account, and where the change of government hath been upon occasion of the tyranny and misgovernment of those that have been placed over them." And he proceeded slightly to recall many examples, several foreign, a considerable number Scottish, some English. Having then asserted the existence of a contract, or bargain, between king and people, and mutual obligations, he thus proceeded to comment upon the delinquencies of the king. "Sir, that we are now upon, by the command of the highest court, hath been and is, to try and judge you for these great offences of yours. Sir, the charge hath called you tyrant, traitor, a murderer and a public enemy to the commonwealth of England. Sir, it had been well if any of these terms might rightly and justly have been spared; if any one of them all." The king uttered an interjection of surprize and indignation. The president then affirmed him a *tyrant* from the arbitrary government he had sought to establish; a *traitor*, as guilty of breach of trust towards his *superior*, the kingdom. "And therefore, sir," he added, "for this breach of trust when you are called to account, your are called to account by your superiors."—A *murderer*, because all the bloody murders acted or committed in the late wars were to be laid to his charge. After which he thus wound up the whole proceeding: "Sir, all that I shall say before the reading of your sentence, it is but this: The court does heartily desire you will seriously think of those evils that you stand guilty of. Sir, you said to us the other day, you wished us to have God before our eyes; truly, sir, I hope all of us have so; that God that we know is a king of kings and lord of lords,—that God with whom there is no respect of persons,—that God that is the avenger of innocent blood. We have that God before us that does bestow a curse upon them that withhold their hands from shedding of blood; which is in the case of guilty malefactors, and that do deserve death: That God we have before our eyes. And, were it not that the consequence of our duty hath called us to this place and this employment, sir, you should have had no appearence of a court here; but, sir, we must prefer the discharge of our duty unto God and unto the kingdom before any other respect whatsoever; and although at this time many of us, if not all of us, are severely threatened by some of your party what they intend to do, we do here declare that we shall not decline or forbear the doing of our duty in the administration of justice even to you, according to the merit of your offence, although God should permit these men to effect all that bloody design in hand against us." He concluded by urging the example of David's repentance on the king's imitation.

King. "I would desire only one word before you give sentence; and that is, that you would hear me concerning these great imputations that you have laid to my charge."—*President.* "Sir, you must give me now leave to go on, for I am not far from your sentence, and your time is past." Again the king pressed to speak, but was again reminded that he had not owned the court, and "too much liberty and delay had been given him already," and a fresh exhortation to repentance was bestowed upon him. The sentence was now read, and the president affirmed it for "the sentence, judgment, and resolution of the whole court," all the members of which stood up as assenting to it.—*King.* "Will you hear me a word, sir?"—*President.* "Sir, you are not to be heard after your sentence. No, by your favor, sir. Guard, withdraw your prisoner." The king again attempted to speak, but being again interrupted, said, "*I* am not suffered to speak; expect what justice other people will have." The court dispersed.

Thus concluded the most memorable, and in all its circumstances the most unprecedented, judicial proceeding on record. It is exceedingly remarkable that no legal advisers were assigned to the king by the court, and that he made no application for such assistance either before or during the trial. We may perhaps infer, that his resolution was fixed from the beginning to make no acknowledgment of the authority of a court so irregularly constituted in every possible respect, and consequently no defence. By this determination he consulted the interest of his reputation for dignity and consistency, and certainly without sacrificing any chances of acquittal. In the preliminary admission that the source of all power is in the people, and the kingly office a trust of which they are entitled to require an account, he would have pronounced his own sentence of condemnation; for the facts charged were of such a nature as to admit of no denial. In his appeal to the two houses alone there was some compromise of his great principle of irresponsibility. It has been supposed that it was his intention to have abdicated in favor of his son; but as he failed to take any other means of making known that purpose, it is probable that the conjecture is erroneous; and that the design of his appeal was no other than to improve to his advantage the dissension already subsisting between the lords and that packed assembly which called itself the house of commons. Delay might still have afforded scope to some efforts in his favor,—so at least his strange faculty of hoping what he desired may have persuaded him. Yet from what quarter should they arise? No domestic party, it was plain, could attempt his release from the iron grasp of armed force which held him; and with respect to foreign aid, it was now his turn to repeat with Strafford in despair, "Put not your trust in princes!" The potentates of Europe, even those most nearly connected by blood or alliance, viewed his fate with silent apathy. No ambassador from any power or state was sent to intercede in his behalf, excepting one from the United Provinces, commissioned by desire of the prince of Wales, who was not heard till the day before the execution of the king's sentence, when he proved himself but a "cold solicitor."

The prince performed the idle ceremony of sending to the parliament a signed *carte blanche* as ransom for his father's life. Henrietta had previously caused a letter to be delivered by the French ambassador to the Speaker, in which she desired that the house of commons would grant her a pass to come to England that she might use her influence with the king to grant all that they desired, or that at least she might attend upon him in his extremity. But the house would not suffer the letter to be read.

Now first perceiving his death to be inevitable and imminent, Charles commenced his preparations for the event with dignity and composure. Having obtained the attendance of bishop Juxon, he passed the greater part of his last days in the offices of devotion. He declined the offered visit of his nephew the elector of Palatine; but requested that his two children remaining in England, the princess Elizabeth, then in her thirteenth year, and the duke of Gloucester, in his ninth, might be brought to take a last farewell of their father. The sorrowful parting, and especially the bitter tears and lamentations of the young princess, moved "those to pity that formerly were hard-hearted." Together with his prayers and blessings, the father distributed to them a few jewels —all the wealth that was now left him to bestow upon his children.

On the last night, colonel Hacker, who commanded the guard, "would have placed two musqueteers in the king's bedchamber, which his majesty being

acquainted with, he made no reply, only gave a sigh;" but by the entreaties of bishop Juxon and of Herbert he was induced to reverse this unfeeling order.

Charles had lodged at St. James's for two or three nights, whilst the scaffold was preparing in front of Whitehall. On the fatal morning, about ten o'clock, the king was conducted through the garden of the palace and the park to the spot. In the park several companies of foot soldiers were drawn up, with drums beating and colors flying, who formed a line for the king to pass, and his immediate guard of halberdiers attended him, with some of his own gentlemen before, and some behind, walking bare-headed. Juxon went on the right hand of the king, and colonel Tomlinson, to whose custody he was now confided, on the left, the king conversing with him as they went. On arriving at Whitehall, his majesty passed along the galleries to his own bed chamber, where after a little repose the bishop went to prayer; and this being concluded, the king partook of a little bread and wine. Soon after, Hacker came to the chamber door and gave his last signal; on which the bishop and Herbert weeping, fell on their knees, and the king gave them his hands to kiss. He was conducted with the same attendance as before, through the galleries into the banqueting house, and thence, by a passage broken in the wall, upon the scaffold. As he passed along, with a cheerful countennnce, many, both men and women, crowded in to gaze upon him, and he could hear them praying for him, "the soldiers not rebuking any of them; by their silence and dejected faces seeming afflicted rather than insulting." Having first looked earnestly at the block, and asked if there were no higher one, the king prepared to speak, addressing himself chiefly to colonel Tomlinson, who stood by his side, aware, as he said, that he should "be heard of few." His speech was an attempted vindication of his political conduct, in which he thought proper to call to witness that God before whom he must shortly appear, that he "never did intend to encroach upon the privileges" of the two-houses of parliament," but that they "began upon" him by laying claim to the militia. He also said, that an unjust sentence which he had suffered to take effect, was now punished by an unjust sentence upon himself. He asserted that he was as much a friend to the liberty and freedom of the people as any one, but that these consisted in having government, and those laws by which their lives and goods might be most their own. To have a share in the government was "nothing pertaining to them, a sovereign and a subject being clean different things." At the suggestion of the bishop, he made a declaration of his adherence to the Church of England as it had been left to him by his father; and thus concluded: "I have a good cause, I have a gracious God, and I will say no more."

He then laid down his head upon the block, and after a few moments spent in prayer, he gave the signal by streaching forth his hands, and it was severed at a single blow. At that awful moment, all other sentiments were lost in grief and horror, and "a dismal universal groan" burst forth from the congregated thousands.

French Colony in Africa.—Boujeiah, the place against which the French expedition from Toulon is directed, lies about half way between Algiers and Constantine, and close to it is the mouth of the Zowah, the most considerable river of the Regency, and upon which is situated the city of Constantine. The harbor is very spacious, much larger than that of Algiers, but not so secure. The Spaniards landed here in the beginning of the sixteenth century. During the minority of Charles I, of Spain, under the regency of Don Ferdinand of Arragon, Cardinal Ximenes, in the year 1509, obtained permission to undertake the conquest of Oran, then a flourishing place, and a kind of republic, under the protection of the Bey of Tremesan, and which, if conquered, was to remain to the Cardinal and his successors in the sea of Tolodo, till the Regent should repay the charge of the expedition, as the Cardinal furnished everything except the transports. Having equipped an armament consisting of 10,000 infantry and 4,000 horse, and taking as second in command Count Pedro Navarro, the Cardinal set sail, and landed at Boujeiah. Disembarking all the infantry and 2,000 horse, he ordered the vessel with the rest of the cavalry, to sail direct for Oran. The Moors not conceiving that any of the force had been sent around, went out and gave the Spaniards battle; but after gallantly defending themselves, seeing the Christain flag flying on the walls of their city, they gave way, and were soon dispersed and cut to pieces. Cardinal Ximenes then returned to Alcala, where he was founding an university, leaving the command of the whole to Don Pedro Navarro, who, assuming the title of General of the forces, conquered the kingdom of Boujeiah, and forced the Beys of Tunis and Tremesan to become tributaries, as also the city of Algiers, until, passing his conquests too far, he suffered a defeat, and in 1510 was routed before Tripoli, when he lost several thousand of his best men. The Regent of Spain, however, being determined to carry on the war, declared he would go in person, and ordered vast preparations to be made throughout the kingdom. This had its desired effect of intimidating, for without striking another blow, it brought the Moors to submission, obliged them to restore all the Christian slaves, to become his vassals, and to pay him annually large tributary sums.

Oran was kept in possession by the Spaniards till 1708, when it was retaken; they, however, became masters of it again in 1732. In 1790 nearly the whole of the city was destroyed by an earthquake, when 2,000 persons perished; since which the Spaniards have evacuated it, and it is now in the occupation of the French.

Charles the First of Spain, with Don Lewis of Portugal, having together 140 ships of war and gallies, and 260 vessels of smaller size, also landed at Boujeiah in 1534, when they took the fortress of Goletta, the greatest naval and military deposit belonging to the Bey of Tunis, which the Spaniards retained till 1574, when Selim the Second took it from them.

In June last the French forces in Algiers amounted to 17,000 men, 4,000 forming the garrison of that place, conjointly with the 5,000 National Guards, and the remaining 13,000 were quartered in the different forts and advanced posts; and the present expedition preparing for Boujeiah will make, it is said, an addition of 4,000 more. All the officers to be employed on the occasion have been furnished with a map of the town of Boujeiah and its environs.

Geography of Mars.—In this planet we discern, with perfect distinctness, the outlines of what may be continents and seas. Of these, the former are distinguished by that ruddy colour which characterizes the light of this planet (which always appears red and fiery) and indicates, no doubt, an ochrey tinge in the general soil, like what the red sandstone districts on the Earth may possibly offer to the inhabitants of Mars, only more decided. Contrasted with this (by a general law in optics) the seas, as we may call them, appear greenish. These spots, however, are not always to be seen equally distinct, though, when seen, they offer always the same appearance. This may arise from the planet not being entirely destitute of atmosphere and clouds; and what adds greatly to the probability of this is the appearance of brilliant white spots at its poles, which have been conjectured with a great deal of probability to be snow; as they disappear when they have been long exposed to the sun, and are greatest when just emerging from the long night of their polar winter. By watching the spots during a whole night, and on successive nights, it is found that Mars has a rotation on an axis in a period of 24h. 36m. 21s. in the same direction as the Earth's, or from west to east.—[Sir J. Herschel on Astronomy.—Cabinet Cyclopædia.]

Archery.—In the "United Service Journal" we find the following account of archery as it *was*; which is curious, and seems to us to exhibit the *beau ideal* of the art and mystery, rather than any thing upon which one could strictly rely as facts, however supported by historical authority. It says:—

"The test of good archery with Edward VI. was that a hundred of his youth, in rank, should send, at one discharge, their hundred shafts clear through an inch board of heart of oak, at the distance of 240 yards. This was the minimum of military archery with youth. It was at the battle of Falkirk, in 1298, that the power of English archery became supreme. Edward I. interspersed his long bowmen among his other troops of every description, and the battle was little less than an unresisting slaughter of the best of the Scottish warriors. At the battle of Flodden Field the Scottish Monarch, enraged at the slaughter of his troops, directed sixty of his brave knights, in Italian armor, to rush on a body of the English archers, and at the first discharge, every knight was killed by an arrow through the body. P. de Comines, speaking of the military power of England, France, and Scotland, lays it down that 'the might of the realm of England standeth on her archery;' and it is curious to trace the excessive fastidiousness and care of our ancestors with respect to it. Edward IV. directed that the long-bow should be made of ewye, wyche hazel, ash, awnrub, or reason tree, but the ewye, (yew) was the preferable wood. The string was to be made of hide, gut, horse hair, woman's hair, hemp, or silk. The bow was directed to be the precise height of the archer, and one of six feet long was the maximum of power. The most anxious care was bestowed on the arrow. Its length was to be exactly half that of the bow. The feathers were not to be plucked from the goose, but were to drop from the bird at between the age of two and three years. Two of the feathers were to be from the gander, whilst the third, always placed uppermost in the act of shooting, was to be dropped by the goose. The arrow was pointed with flint or steel; and the punishment severe if the directions were in any respect violated. It was illegal, and, what was perhaps worse, it was disgraceful, to shoot at a less distance than 200 yards. The longest shot upon record was that of the Lancashire archer, who shot his shaft a mile in three shots. This has been nearly equalled within these few years. A Turkish Ambassador in London discharged an arrow 480 yards, and a Turk at Athens sent his shaft 584 yards, which is only three yards short of the third of a mile. It was a test with our archers to send the cloth yard shaft at 320 yards distance, through an oaken plank, from one to three inches in thickness, and to lodge the arrow in a board placed many yards in the rear."

This is good—we suspect a musket ball fired at 320 yards from a three inch plank, would, if it hit it, be satisfied with staying in it very quietly, and express neither a desire nor an intention of travelling to a board placed many yards in the rear, that day. Sending a shaft 584 yards is a wonderful thing, but sending it 350, with the intervention of a three inch plank, is what we suspect could only be done with a very long bow indeed.

POETRY.

TO MARY—IN ITALY.

And thus all things have comforting
In that, that doth them comfort bring;
Save I, alas! whom neither sun,
Nor aught that God hath wrought and done,
May comfort aught; as though I were
A thing not made for comfort here:
For, being absent from your sight,
Which are my joy and whole delight,
My comfort and my pleasure too,
How can I joy!—how should I do?

Earl of Surrey's Poems.

I wait for thy coming
In the sweet-scented eves,
When the birds are humming
In the gloom of the leaves;
And the fountain danceth,
Its path along,
Like a creature that loveth
To speak in song.
The bird and the fountain
Rejoice in their lot;
But my spirit is sad,
For I see thee not.

I wait for thee, love:
On the emerald deep
The sun, like a warrior,
Is sinking to sleep.
I see the leaves shining
Around the dove's nest.
Why doth she sit pining
Alone in her nest?
Her companion returneth
From the cool orange tree;
But thy feet return not—
Return not, to me!

I am weary of listening
To the voice of the breeze,
And the white bird gli-tening
Among the almond trees;
It leapeth on the boughs,
While its silver wings glow
With the light through the leaves,
As it darts to and fro.
I turn away in tears
From the fountain and tree;
I care not for bird or flower,
If thou comest not to me.

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made on the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy, N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. L. Brower, 222 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

H. BURDEN.

J23 4m

MARRIAGES.

On Sunday evening, by the Rev. Mr. Ludlow, Mr. JONES, to Miss MARGARET ELDERT, daughter of Frederick A. Schaeffer, Esq. all of this city.

On Saturday evening, by the Rev. Dr. Westbrook, Sylvanus Rapelje, Esq. of New York, Deputy U. S. Marshal of the South District of N. Y., to Miss RACHEL ANN, daughter of the late W. E. Van Voorhis, Esq.

On Monday evening, Mr. JONAH NEWTON, formerly of Southborough, Mass. to Mrs. ISABELLA G. STEWART, of Scotland.

At Trinity Church, in New Haven, Conn. on Saturday, 9th inst. by the Rev. Harry Croswell, RICHARD R. CRAWFORD, Esq. of the District of Columbia, to Miss HARRIET A. daughter of W. H. Jones, Esq. of the former place

DEATHS.

Yesterday, in the 74th year of her age, ESTHER ROGERS, widow of ARCHIBALD GRACIE.

Friday evening, Nov. 15, Dr. E. L. KNAPP, in the 28th year of his age.

After a lingering illness, JOHN MOREY, Esq. a native of Berkshire, Eng. aged 60.

On the 19th inst. after a lingering illness, in the 32d year of his age, CHARLES U. THERIATT.

On Saturday evening, Mr. WM. A. S. SMITH, painter, aged 32 years, after a long and painful illness.

Last evening, ANN W. wife of George Lasgdon Storer, in the 36th year of her age.

This morning, of Hemorrhage of the Lungs, in the 34th year of her age, SUSANNAH MAGDALENE, wife of William Morgan, and daughter of Isaac Coutant, deceased.

In Morristown, New-Jersey, on Monday last, of scarlet fever, Miss PHEBE JOHNSON.

At Millstone, N. J., Nov. 18th, in the 84th year of his age, Capt. ABRAHAM VAN NEST, a soldier of the Revolution.

At Bedford Academy, Westchester County, on Thursday, the 14th inst., JOSEPH, eldest son of Joseph Hoxie, of this city, in the 13th year of his age.

At Hudson, on the 12th ult., Mr. JOHN GREENE, late of this city, in the 77th year of age

At Fort Gibson, Mississippi, on the 24th ult., of yellow fever, THOMAS B. REED, Esq., Attorney and Counsellor at Law, of Vicksburg, son of the late Thomas B. Reed, of the U. S. Senate, in the 23d year of his age.

At New Orleans, Capt. DAVID WHEATON, of the steamboat Whale.

On the 25th of September, at Southampton, (Eng.) Major PHILIP VAN CORTLANDT, in the 68th year of his age.

BOSTON AND WORCESTER RAILROAD.

Proposals will be received until the 2d December next, for the GRADING AND MASONRY of the Third Division of the Road from Southborough to Grafton.

Further information may be obtained at the Company's Rooms, Nos. 7 and 9 Joy's Building, Boston.

n16 3t NATHAN HALE, Superintendant.

GRACIE, PRIME & CO. having this day taken into co-partnership JOHN CLARKSON JAY, will continue their business under the same firm.—New-York, 1st October, 1833.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, } *Flat Bars* in
200 do. 1½ do. ¾ do. } lengths of 14 to 15
40 do. 1¼ do. ¾ do. } feet counter sunk
900 do. 2 do. ¾ do. } holes, ends cut at
800 do. 2½ do. ¾ do. } an angle of 45 de-
soon expected. } grees with appli-
cing plates, nails
to suit.

200 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

The above will be sold free of duty, to State Governments, and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. s7&meowr

TO RAILROAD COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, will undertake to build CARS that will carry along their own railway, and may be used on level M'Adam roads. They will save ten millions of money to be wasted on 1000 miles of iron railroads to be laid in the United States within a few years, and dispense with tracks and double tracks. These Cars may be drawn by horses or steam. He claims to have discovered them ever since 1824, by his caveats filed in the Patent Office. Apply, post paid. S1 RJMM&F

TO STEAMBOAT COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, offers his services to render steamboats incombustible, and not liable to sink, even by the bursting of boilers, or striking against snags, sawyers and rocks. This will save many boats, much property, and the lives of hundreds every year. Those who neglect this easy improvement, deserve to be neglected and deserted by the public as unmindful of safety. Apply, post paid. S1 RJMM&F

☞ THE ADDRESS OF J. P KENNEDY, Esq. of Baltimore, delivered before the Members of the American Institute in this city, together with a full account of the FAIR, held at Masonic Hall, for 1833, and for which a copy-right has been secured, is just published in pamphlet form, at the office of the MECHANICS' MAGAZINE, No 35 Wall street, where it may be had by the single number, dozen, or hundred. n16

FOR SALE,

☞ ATLANTIC JOURNAL AND FRIEND OF KNOWLEDGE—A Quarterly Journal, by Professor Rafinesque, of Philadelphia, begun in the spring of 1832, with wood cuts, &c dedicated to Historical and Natural Sciences, Botany, Agriculture, &c. at one dollar per annum.

MEDICAL FLORA OF THE UNITED STATES, in 2 vols. with 140 plates, containing also the economical properties of 500 genera of American plants. $3.

MANUAL OF AMERICAN VINES, and Art of Making Wines, with 8 figures. 25 cents.

FISHES AND SHELLS OF THE RIVER OHIO. 1 dollar.

AMERICAN FLORIST, with 36 figures—price 36 cts.

*** Orders for these works, or any other of Professor Rafinesque's, received at this office. A9 tf J M & F

INCOMBUSTIBLE ARCHITECTURE.

☞ INCOMBUSTIBLE dwelling-houses and buildings of all kinds devised or built in New-York, or any part of the United States, as cheap as any other combustible buildings. Actual buildings and houses rendered incombustible at a small additional expense.

SHIPS of all sorts, and Steamboats, rendered incombustible, and not liable to sink, at a small expense.

For sale, 10,000 lbs. of ANTIGNIS, or Incombustible Varnish, at one dollar per lb.

Apply to C. S. RAFINESQUE, Professor of Hist. and Nat Sciences, Chemist, Architect, &c. in Philadelphia, No. 39 North 8th street. A pamphlet given gratis.

References in New-York.—Mr. Minor, Editor of the Mechanics' Magazine; Messrs. Rushton & Aspinwall, Druggists. Editors in the city or country, copying this advertisement, will receive a commission on any contract procured by their means. S1 R J M M & F

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, }
January 29, 1833. } F3 tf

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality, warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, J31 6t corner of Maidenlane.

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later of angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad. and Germant. and Norrist. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads,
No. 264 Elizabeth street, near Bleecker street,
New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation. J15 tf

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. n18

RAILROAD CAR WHEELS AND BOXES,

AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete, at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

INSTRUMENTS

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Hearte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD. U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Hearte.—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them upon application, to any persons desirous of perusing the same. m18